COMMONWEALTH OF VIRGINIA

TRANSPORTATION
PERFORMANCE TREND
REPORT - 2008

Introduction

Current Virginia law requires the Office of Intermodal Planning and Investment (OIPI) to develop transportation performance measures and provide an annual transportation performance report. The 2008 Transportation Performance Report is the third edition. This report differs from individual agency or mode performance reports, such as VDOT's Dashboard, in that it evaluates the state of the overall transportation system rather than that of a particular transportation agency. Where appropriate, individual agency performance measures are incorporated.

A letter grade is assigned to each transportation goal as well as to overall performance. Several measures address each goal area; the grades are based on the degree to which the measures match the desired performance trends. A point is awarded when the performance of a given measure trends in the desired direction as compared to the previous year; if the trend is moving in the wrong direction, no point is assigned; and when a trend is level or unchanging from one year to the next, a half-point is assigned. Some of the measures have been assigned a target, either by an agency or by the Governor. If targets are met, an "extra credit" point is given. Missing a target does not count against the overall score, however. The points are summed and divided by the total number of measures to obtain a numerical grade. A corresponding letter grade is then assigned.

This year's version also includes some regional performance measures for the three major regional planning organizations. Later editions of the report are expected to include performance measures for each of the Planning District Commissions as well as additional performance targets.

Details regarding the derivation of letter grades can be found in the User's Guide.

The Kaine Administration is committed to a comprehensive strategy for transportation that includes:

- **Strong Accountability** of our Transportation Agencies
- **Better Connections** between Land use & Transportation Planning
- **More Transportation Choices** for all Virginians.

Dear Fellow Virginians:

Virginia is blessed with an extensive transportation network that connects people, places and products locally, regionally and globally. This network is a critical component of our vibrant economy, and has contributed to the long list of accolades that Virginia has been awarded over the last several years:

- Best State for Business – CNBC, Forbes.com
- Best Managed State – Governing Magazine
- Infrastructure State of the Year - CG/LA Infrastructure

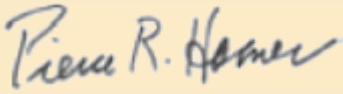
Virginia has also been honored by the American Road and Transportation Builders Association for its outstanding work on public-private partnerships. All of these are tributes to the strength of our economy and governance system.

With that said, our state and our transportation system face some very significant challenges. Three years of debate on transportation funding did not yield a consensus. In the meantime, the economic downturn has exacerbated long standing transportation funding issues. As a result, many of our services have been reduced, our construction programs limited, and our agencies reorganized. Reduced revenues have resulted in the effective elimination of the primary, secondary and urban highway construction formulas. In addition, the current fiscal environment has put the state in the unwelcome situation of choosing to match federal funds or fully fund maintenance. These changes will affect the performance of our current and future transportation system.

The best way to face these challenges is to focus on the basics: safety, preservation and operations. We have made strides to improve the coordination of transportation and land use and additional improvements will be necessary to help manage future needs and costs. In addition, we will continue to bolster the state's transit and rail options, while working to pursue effective public-private partnerships to make the best use of Virginia's transportation dollars.

With the Governor's Transportation Accountability Report as its basis, this website reports on the performance of the state's transportation system and monitors our progress. To view this report, please click on the links above. Thanks for visiting.

Sincerely,



Pierce Homer
Secretary of Transportation

Measures

Statewide Highway Crashes and Fatalities

Transit Crashes

Aviation Crashes

Maritime Security Act

Airport Voluntary Security Certification Program

Safety & Security Plan

Major Metro Area Highway Crashes

Hampton Roads

Richmond Northern VA

Other analysis

Motorcycles

Bicycles

Pedestrians Rail Crossings

Performance Summary

Print Section

Goal: Safety and Security

Provide a safe and secure transportation system

Grade = A

There is no more fundamental responsibility of transportation agencies than to provide for the safety and security of the traveling public. Our goal is to ensure that the transportation system provides the safest roads, buses, trains and airports, and that travelers and commuters are safe and secure while using the system.

Performance Measures

- Number of Highway Fatalities and Fatality Rate per 100 Million Vehicle Miles Traveled
- Number of Highway Crashes and Crash Rate per 100 Million Vehicle Miles Traveled
- Number of Transit Crashes
- Number of Aviation Crashes
- Percentage of Compliance with Maritime Security Act
- Percentage of Participation in Airport Voluntary Certification Program

Did You Know?

In 2008, 80.6% of Virginians wore seatbelts, up from 79.9% in 2007.

Performance Highlights

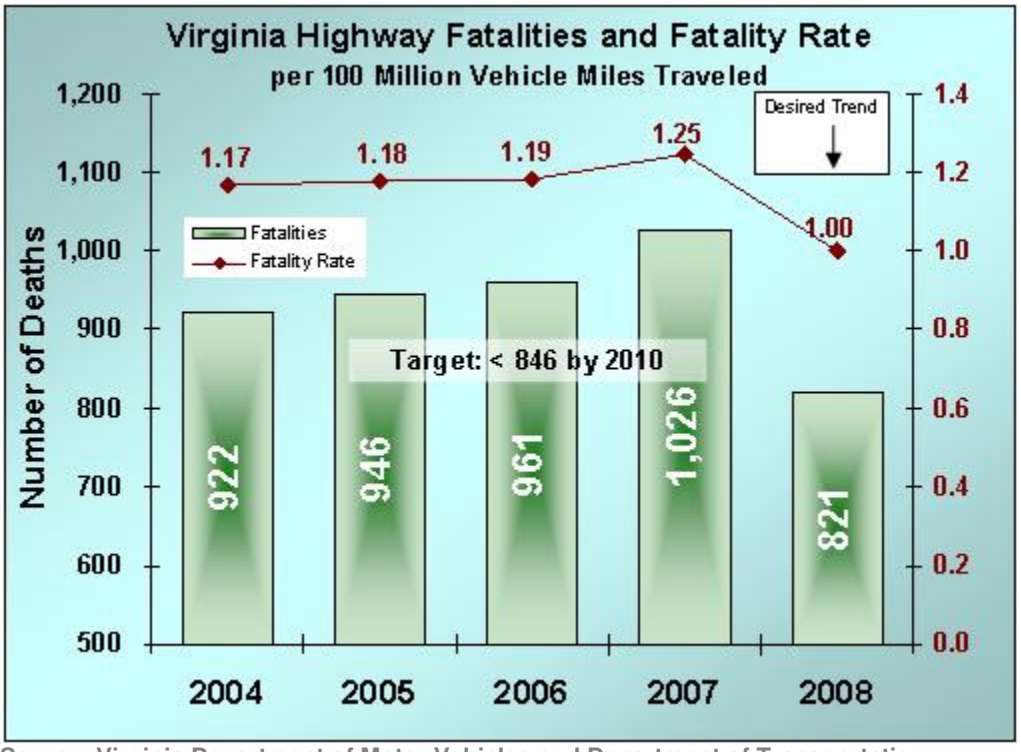
- Statewide highway fatalities totaled 821, a decrease of 205 from 2007, and decreases in fatalities were seen in all three major metro areas
- The highway fatality rate decreased to approximately 1 per 100 million vehicle miles traveled (VMT), down from 1.25 in 2007, and the rate also dropped in all three metro areas.
- The statewide number and rate of highway crashes decreased, as did the crash count and rate for each of the three metro areas
- 2008's 226 public transit crashes resulted in no fatalities. The fatality rate represents a great improvement over the last several years
- 27 aviation accidents resulted in 8 fatalities, down from levels experienced in 2007
- Statewide motorcycle crashes increased from 2,601 to 2,638, but fatalities dropped from 126 to 79
- Vehicle crashes with bikes dropped to 770, but related fatalities increased from 7 to 14
- There were 25 rail crossing crashes, a decrease of 2 from 2007, and no related fatalities

Strategies

- Continue proven highway initiatives such as Click-it or Ticket, Checkpoint Strikeforce and Smooth Operator
- Continue to work collaboratively across transportation agencies
- Continue education and safety training for transit operators and pilots
- Scan all containers exiting Port terminals for radiation
- Implement emerging state-of-the-market technologies to further deter, detect and respond to security intrusions, including smart fencing, intelligent video and mesh communications capabilities

Statewide Highway Fatalities

The 2006 Strategic Highway Safety Plan established a goal of limiting highway crash-related fatalities to 100 less than 2005 levels by 2010. With a total of 821, Virginia surpassed this goal in 2008 but needs to continue focusing on this area in order to sustain continued reduction in future years. 821 fatalities represent a decrease of 205 from 2007.

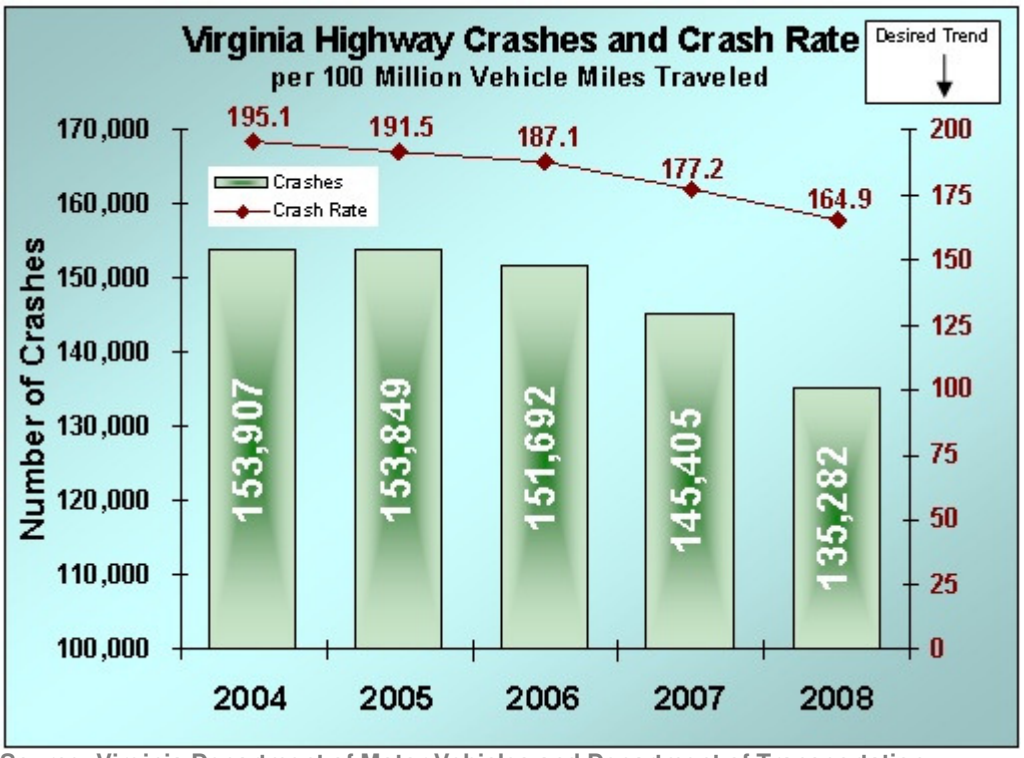


Source: Virginia Department of Motor Vehicles and Department of Transportation

Virginia's highway fatality rate decreased to 1 per 100 million VMT and remained below the national rate, which was 1.27.

Statewide Highway Crashes

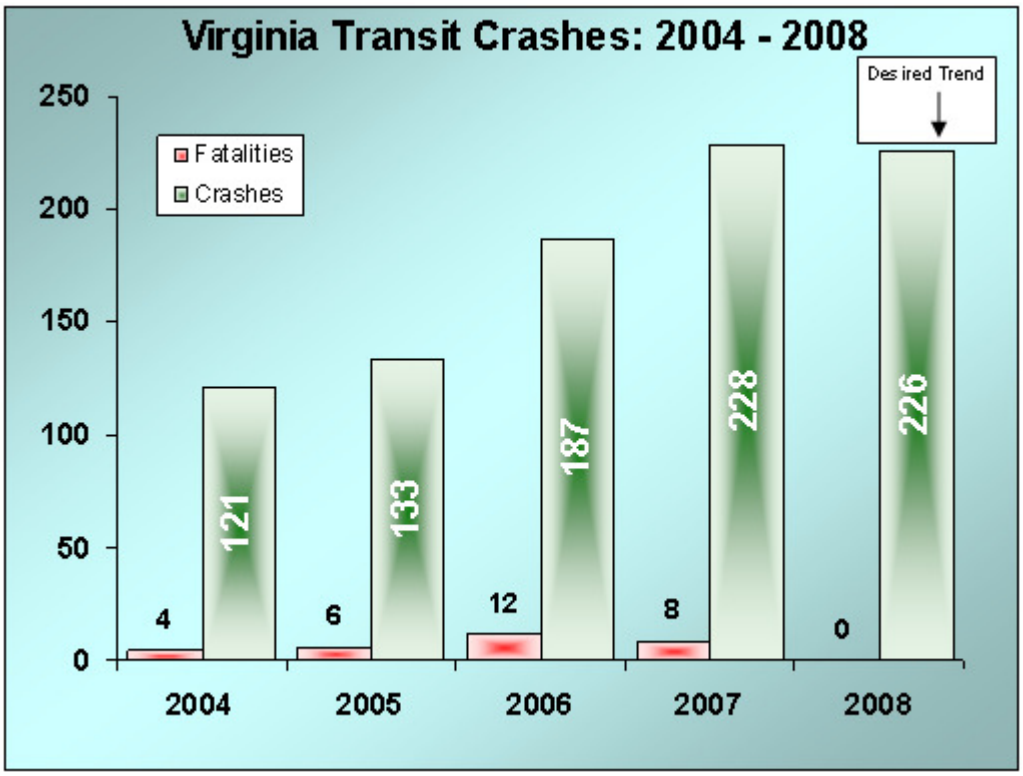
Statewide highway crashes and the corresponding crash rate have trended downward over the last several years. For 2008, the number of crashes decreased to 135,282 from 145,405 in 2007 and the crash rate per 100 million VMT decreased to 164.9 from 177.2.



Source: Virginia Department of Motor Vehicles and Department of Transportation

Transit Crashes

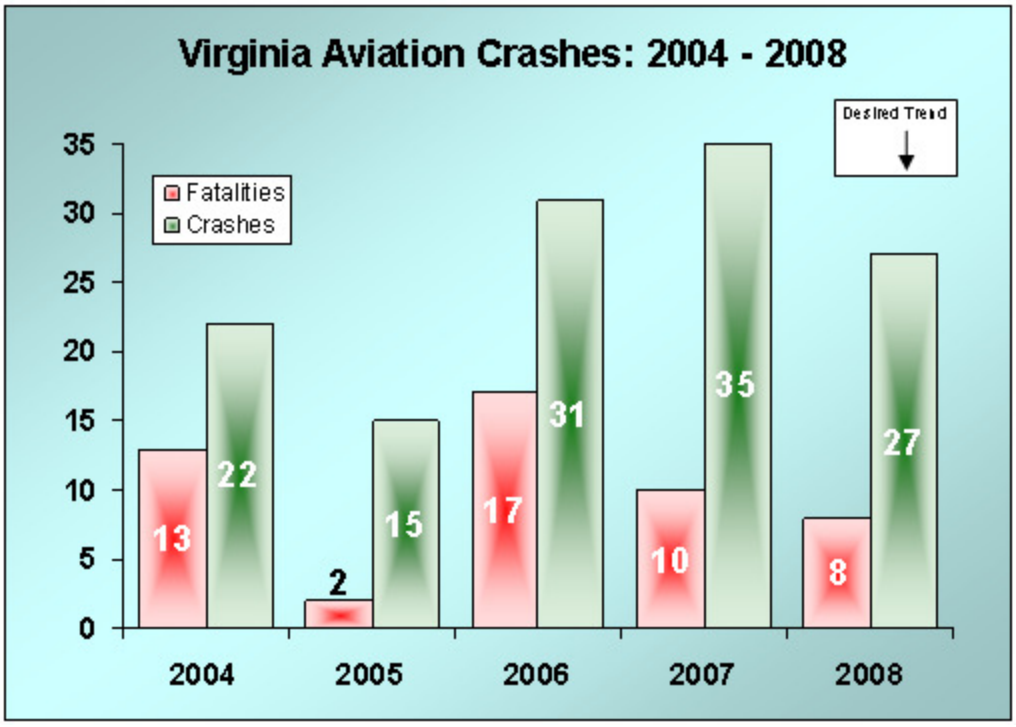
Transit crashes have trended upward over the past several years. In 2008, 226 transit crashes occurred, but no fatalities resulted. This marks a very significant improvement over the last several years.



Source: Virginia Department of Rail and Public Transportation

Aviation Crashes

Aviation accidents have generally trended upward over the past several years, though they decreased down to 27 in 2008 from 35 in 2007.



Source: Virginia Department of Aviation, National Transportation Safety Board (Aviation database)

Maritime Transportation Security Act Compliance

In response to growing concern for the security of our ports, the Maritime Transportation Security Act was signed into federal law in 2002. The Virginia Port Authority (VPA) has been in 100% compliance with the Act's provisions since its inception. The VPA scans all containers exiting the terminals for radiation and exceeds standards for random inspections. The VPA has introduced new electronic gates which record entry to and exit from the terminals and ensure that only port personnel and truck drivers with valid port-issued identification enter the terminals. The federally mandated Transportation Worker Identification Credential (TWIC) has been implemented and is required to access the marine terminals.

Airports Voluntary Security Certification Program

In 2003, the Virginia Department of Aviation (DOAV) established the General Aviation Voluntary Security Certification Program that identified minimum security measures for all of its 57 general aviation airports and encouraged each airport to conduct a screening audit and develop a security plan. As of 2008, 100% of the state's general aviation airports had participated in the Voluntary Security Certification Program, up from 98% in 2007.

The Virginia Department of Aviation (DOAV) was the first state operated department to receive IS-BAO (International Standard for Business Air Craft Operations) certification for safety and business practices.

Safety and Security Plans

The Commonwealth of Virginia Emergency Operations Plan (COVEOP) is a comprehensive framework for the management of statewide incidents that provides the structure and mechanisms for the coordination of state support to impacted local governments and affected individuals and businesses. Each transportation agency has developed and annually updates its Continuity of Operations Plan (COOP) in accordance with Executive Order 44.

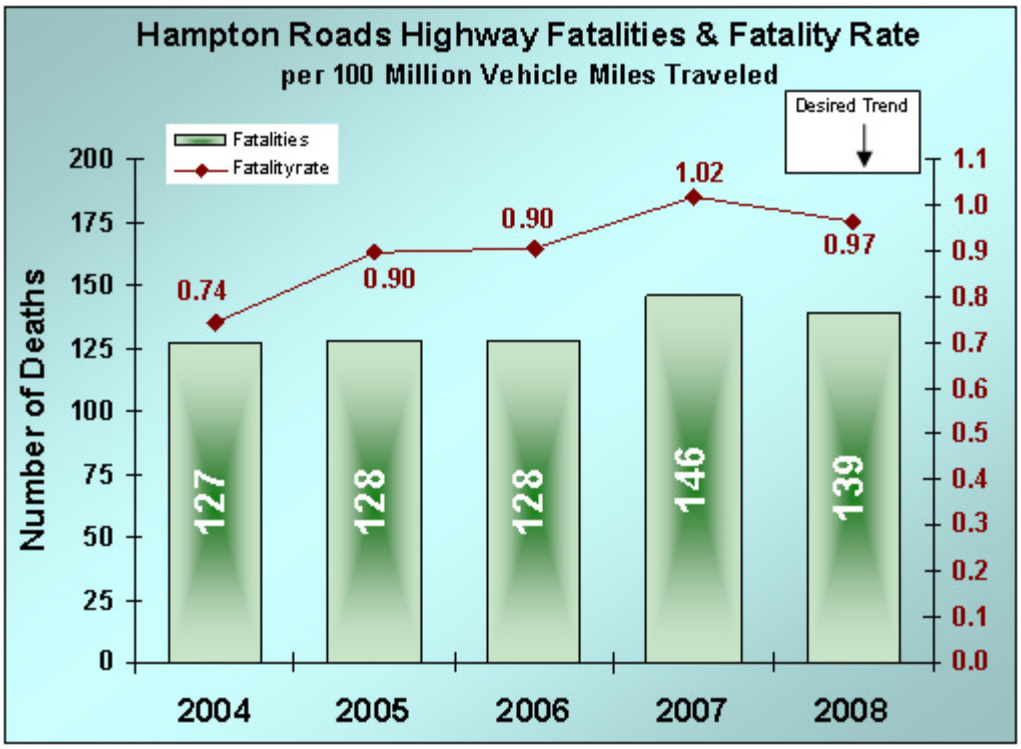
In a related matter, the federal government has been working for several years to establish minimum security standards for state-issued driver's licenses and identification cards through the Real ID Act of 2005 and more recently the PASS ID Act. The Department of Motor Vehicles (DMV) is proceeding aggressively with its plan to meet the goals of overall security standards for state-issued driver's licenses and IDs.

Atlantic hurricane season creates uncertain weather conditions throughout the Commonwealth. The Virginia Department of Emergency Management (VDEM), VDOT, Virginia State Police and the Virginia National Guard have partnered to conduct annual emergency preparedness exercises designed to test the Commonwealth's ability to reverse the east-bound lanes of Interstate 64 for evacuations. The lane reversal exercise diverts westbound traffic to both sides of Interstate 64, testing the ability of the Commonwealth to secure 36 on-ramps while ensuring traffic continues to move safely. The exercise also allows VDOT to analyze data collected to improve the evacuation process based on real world experience.

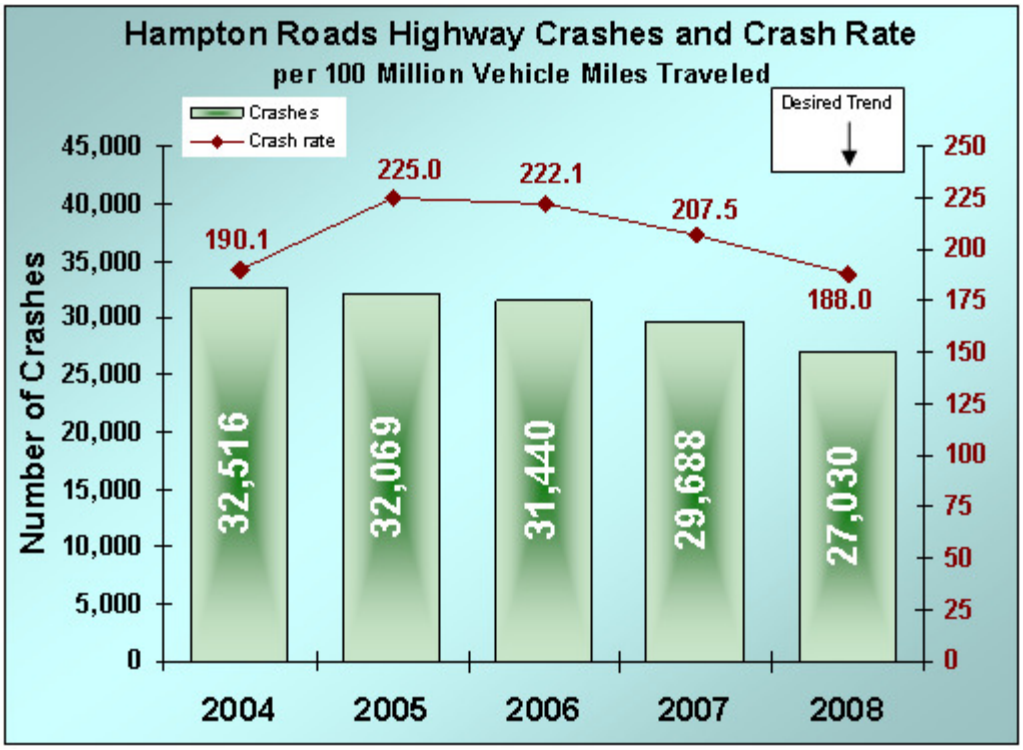
Major Metropolitan Area Highway Crash Information

Both the number of fatalities and the fatality rate have trended downward from 2007 in the three largest metropolitan areas.

Hampton Roads Metro Area

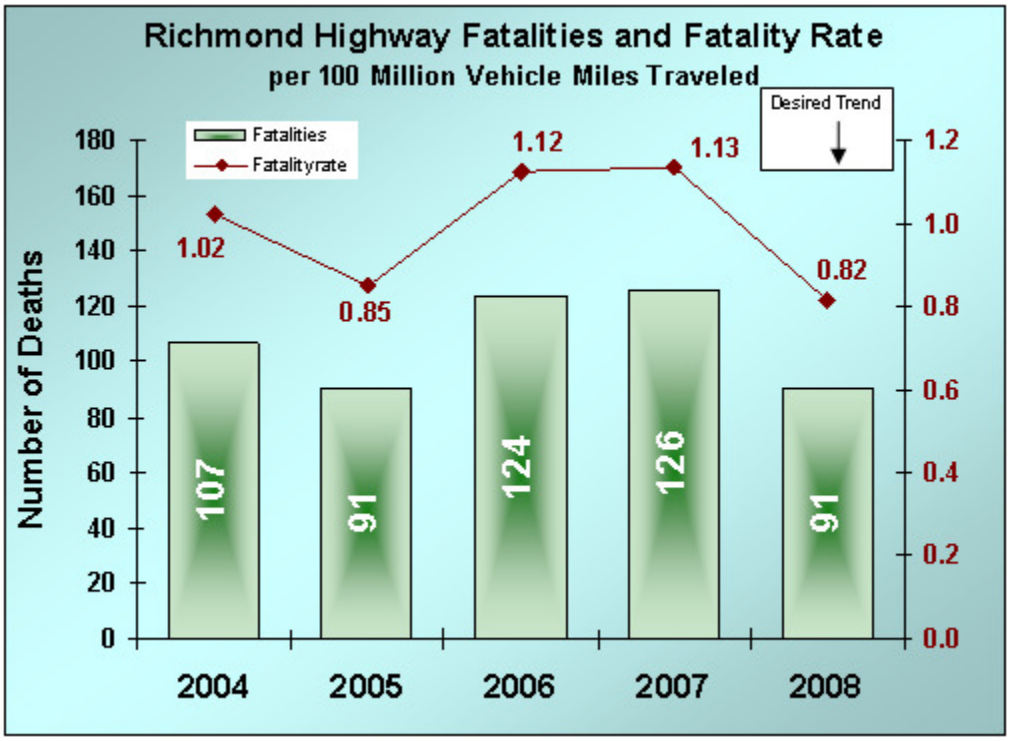


Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

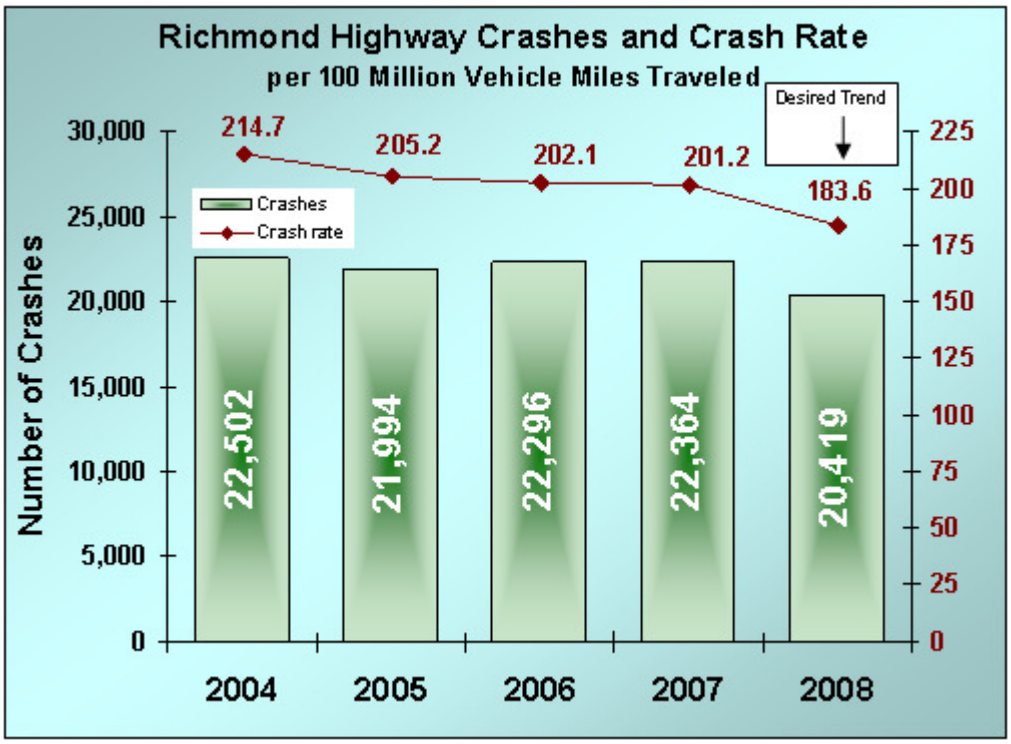


Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

Richmond Metro Area

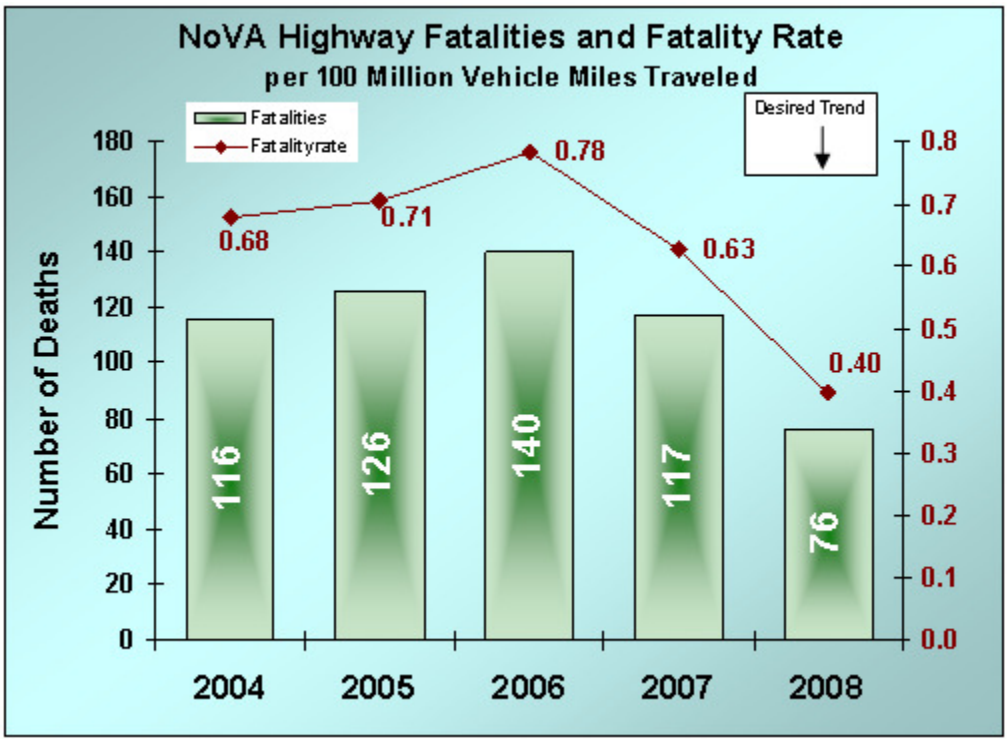


Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

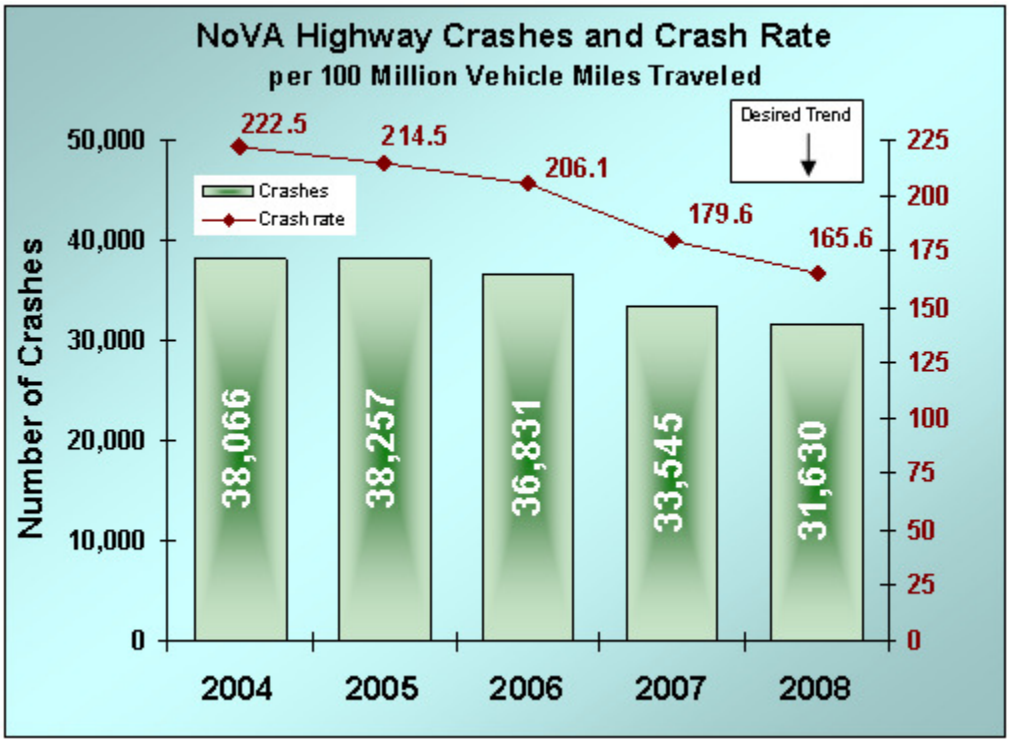


Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

Northern Virginia Metro Area



Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

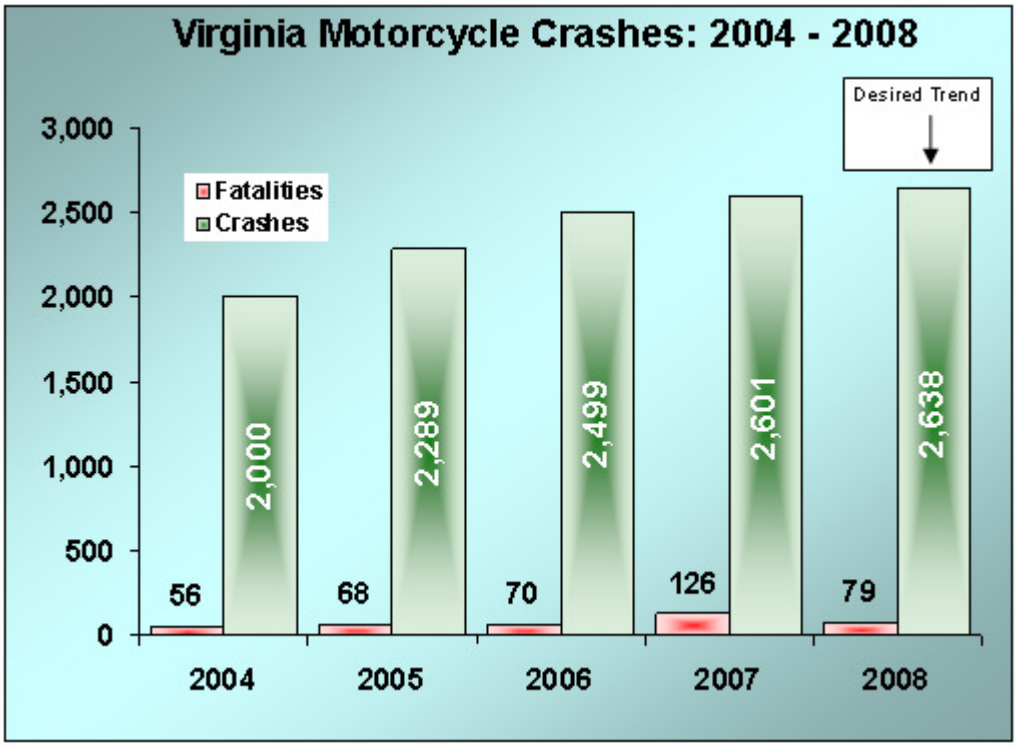


Source: Virginia Department of Motor Vehicles and Department of Transportation (data aligned by planning district commissions)

Other Highway Crash Information

Crashes involving Motorcycles

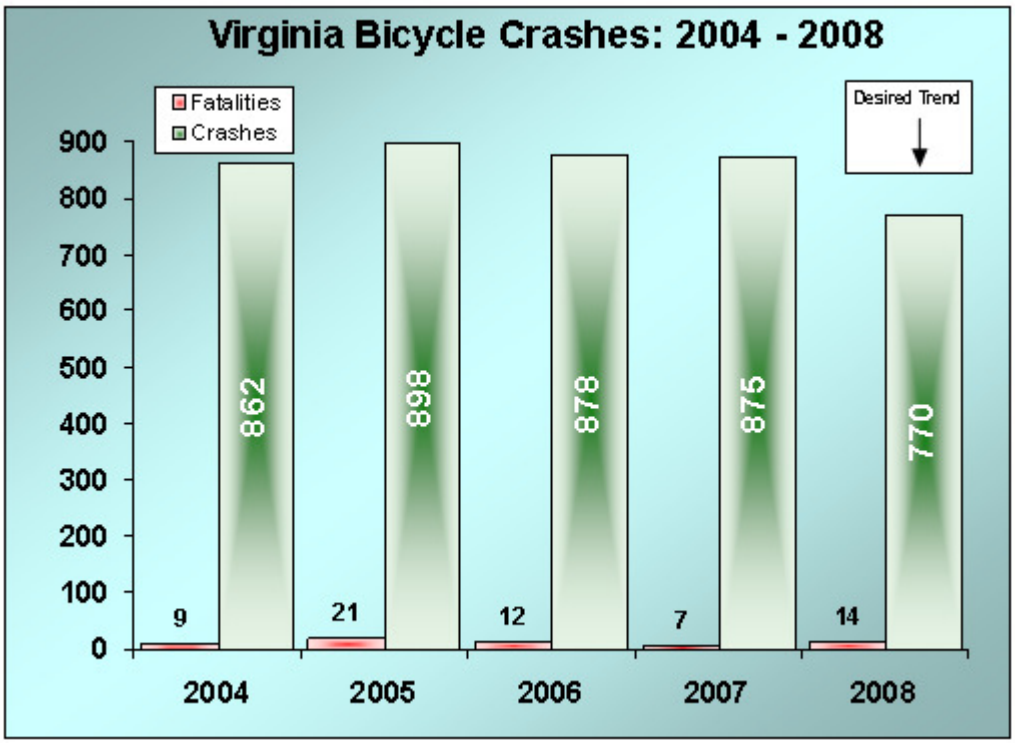
Motorcycle crashes increased from 2,601 in 2007 to 2,638 in 2008, continuing the trend of the past few years.



Source: Virginia Department of Motor Vehicles

Vehicle Crashes involving Bicycles

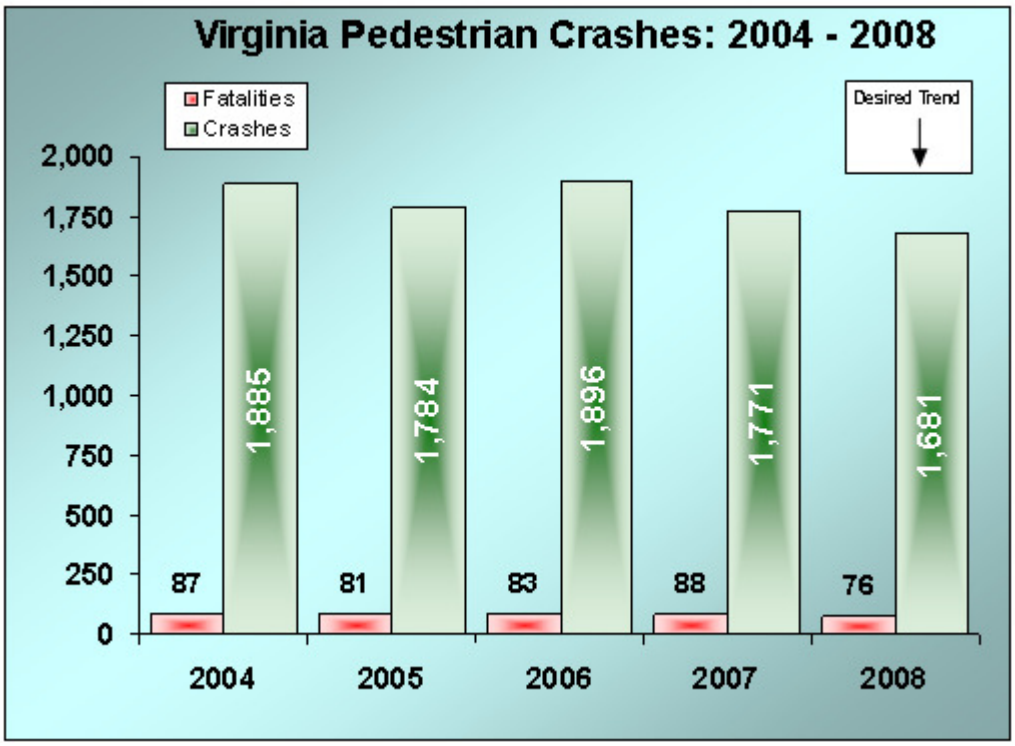
Bicycle crashes decreased significantly in 2008, from 875 to 770, continuing the trend of the past few years.



Source: Virginia Department of Motor Vehicles

Vehicle Crashes Involving Pedestrians

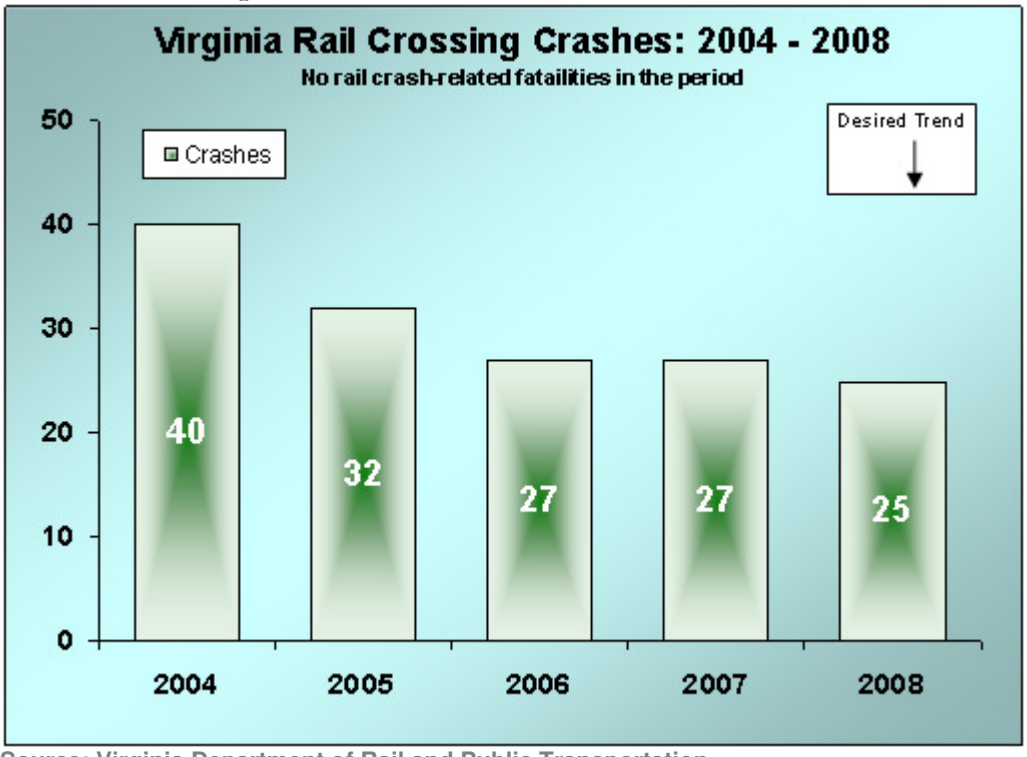
Crashes involving pedestrians have trended downward over the past several years. In 2008, 1,681 crashes involving pedestrians represented a decrease of 90 from 2007.



Source: Virginia Department of Motor Vehicles

Vehicle Crashes at Rail Crossings

Crashes at rail crossings have declined since 2004.



Source: Virginia Department of Rail and Public Transportation

Performance Summary

Grade = A

Performance Measure		Desired Trend	Performance Trend
Highway Fatalities	Number	↓	↓
	Rate per 100M VMT	↓	↓
Highway Crashes	Number	↓	↓
	Rate per 100M VMT	↓	↓
Transit Vehicle Crashes		↓	→
Aviation Crashes		↓	↓
Compliance with Maritime Transportation Security Act		→	→
Airports Participating in Voluntary Security Certification Program		↑	↑
Updated Safety and Security Plans		→	→

Measures

Pavement Condition

Interstate

Primary

Secondary

Bridge Condition

Transit Vehicle Age

Performance Summary

Print Section

Goal: Maintenance and Preservation

Preserve and maintain the condition of the existing transportation system

Grade = D

The Commonwealth has made an enormous investment in an extensive transportation system and it would not be prudent to allow these assets to deteriorate. Timely maintenance of the facilities results in reduced lifecycle costs. Assuring system preservation also addresses other goals of the transportation system. For example, poor pavement condition can reduce travel speeds thus negatively affecting mobility. Poor infrastructure conditions can also require repairs that may result in road closings and detours. And finally, safety can be endangered by poor system condition.

Performance Measures

- Percentage of Interstate Roads in Fair or Better Condition
- Percentage of Primary Roads in Fair or Better Condition
- Percentage of Secondary Roads in Fair or Better Condition
- Percentage of Bridges in Fair or Better Condition
- Transit Vehicle Age

Performance Highlights

- Interstate (79.5%) and Primary (75.6%) roadway pavement condition both fell short of the target of 82% in fair or better condition
- Secondary roadway pavement condition worsened from 2007 (75.8%) to 2008 (71.3%)
- Bridge condition (91.6%) is just below the target of 92% in fair or better condition
- The average transit vehicle age in Virginia is lower than the national average

Strategies

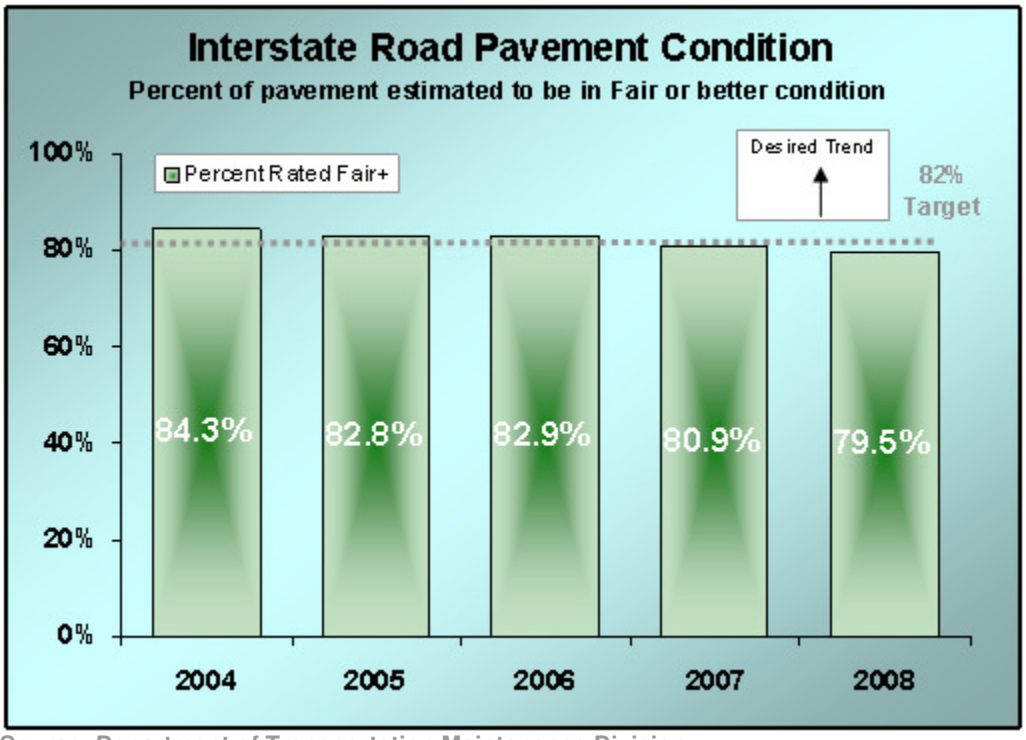
- Implement a pavement management system capable of generating recommendations for the most economical set of activities to preserve and extend pavement life
- Make use of both maintenance and construction funds to repair, rehabilitate and, when appropriate, reconstruct pavements and bridges

Road Pavement in Fair or Better Condition

Pavement condition is measured using the Critical Condition Index (CCI). This index describes pavement condition in terms of whether there are cracks, bumps and ruts. The index ranges from “0” for very poor to “100” for pavement in excellent condition.

Interstate Road Pavement in Fair or Better Condition

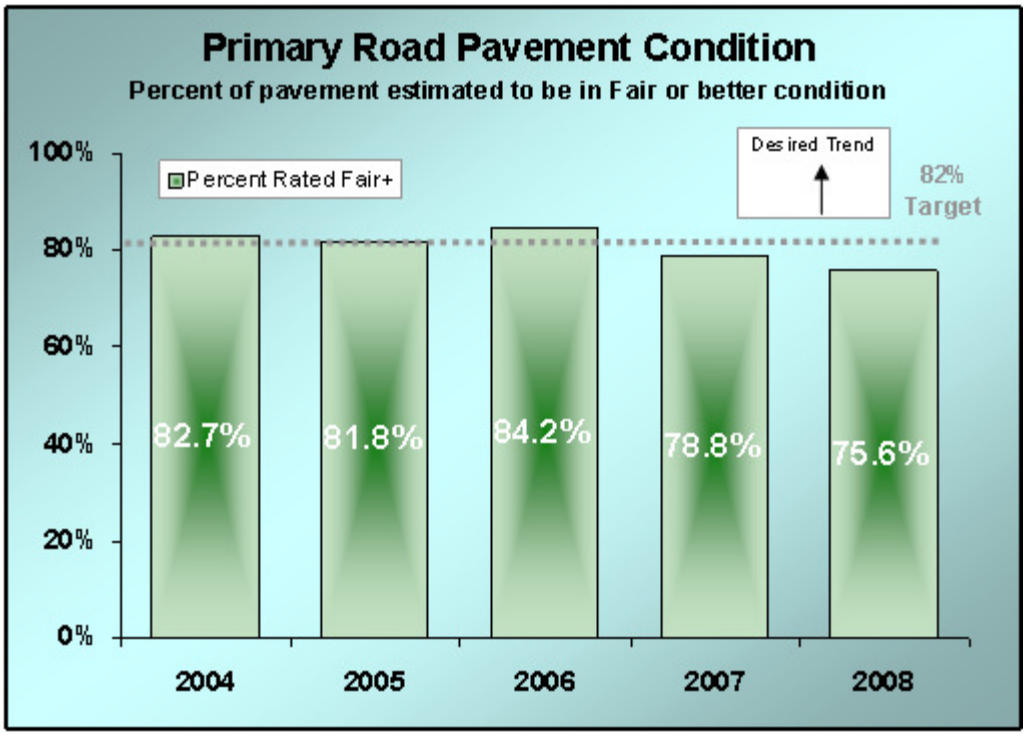
VDOT has set a goal of 82% of interstate system pavements to be in fair or better condition, and 100% of these roadways are surveyed each year. The 82% goal was met for the interstate system until 2007. Fewer than 80% of interstate pavements were rated fair or better in 2008.



Source: Department of Transportation Maintenance Division

Primary Road Pavement in Fair or Better Condition

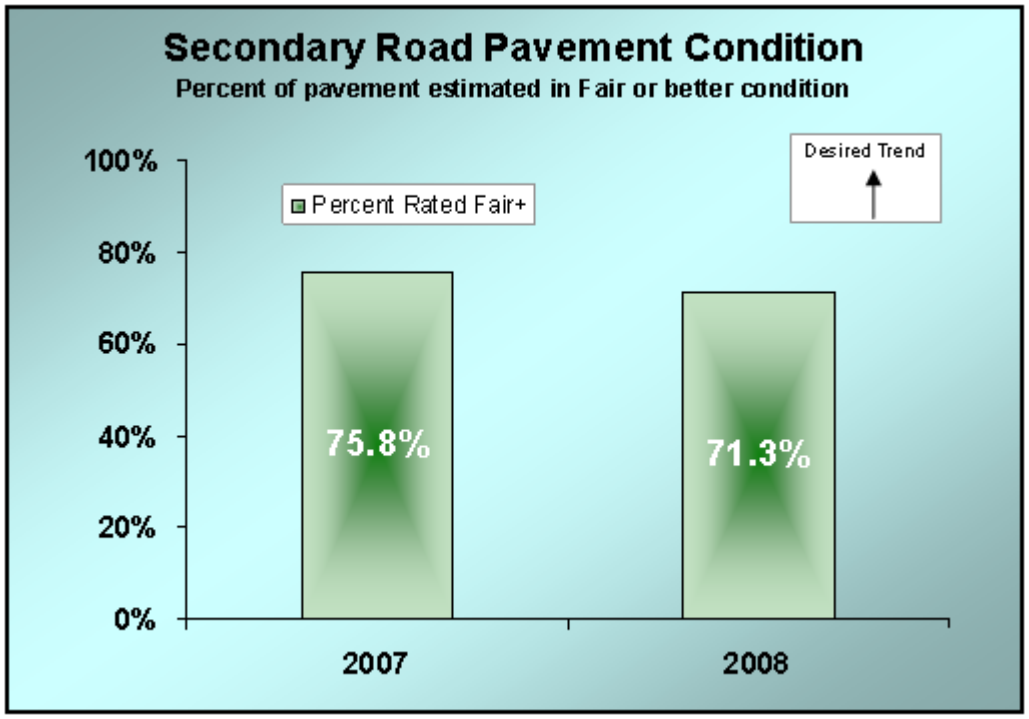
Like the interstate system, the established goal for the primary system is also 82% in fair or better condition and 100% of these roadways are surveyed each year. In 2008, only about 76% of primary roads were rated fair or better, below the 82% goal.



Source: Department of Transportation Maintenance Division

Percentage of Secondary Road Pavement in Fair or Better Condition

A representative sample of 20% of secondary roadways is surveyed each year. The 2008 sampling indicated that 71% of statewide secondary pavement was estimated to be in fair or better condition:

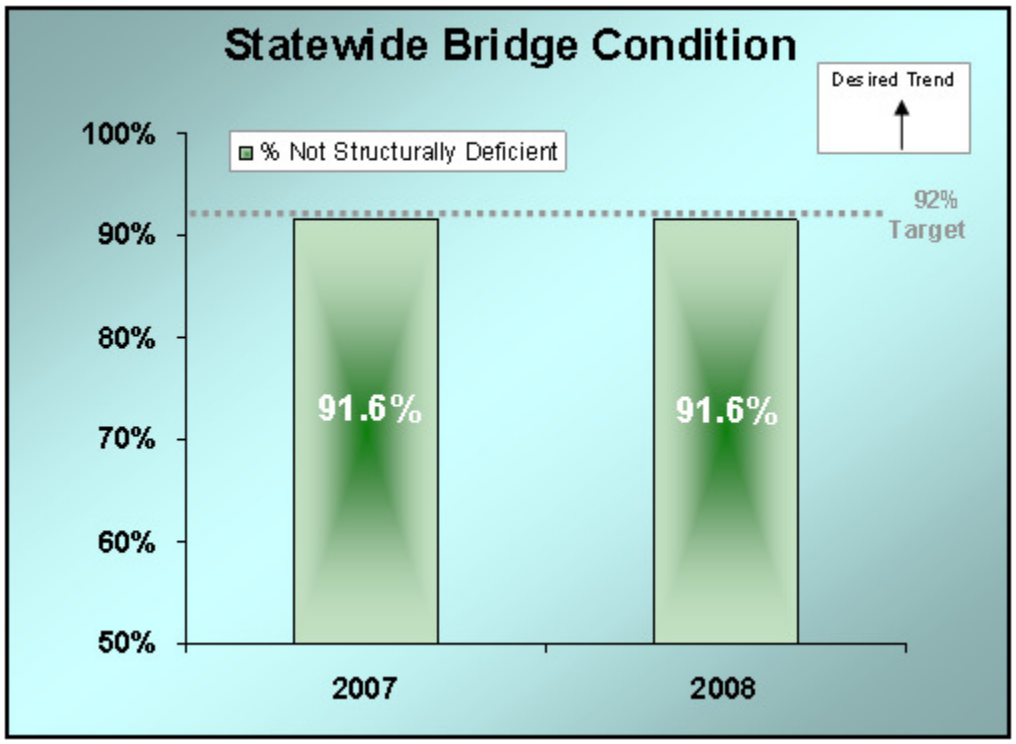


Source: Department of Transportation, State of the Pavement Report (2008)

Percentage of Bridges in Fair or Better Condition

Virginia uses the National Bridge Inventory General Condition Rating (GCR) criteria to identify bridges in need of repair or rehabilitation. The GCR is a numerical scale that ranges from "0" for failed condition to "9" for excellent condition. A structure receiving a GCR of less than six will require more than regular maintenance, and that number has been relatively stable over several years.

Virginia also addresses the structural integrity of bridges using the National Bridge Inspection Standards. These also use a "0" to "9" scale (nine being the best) and any structure receiving a rating of four or less is identified as structurally deficient. A bridge may also be considered structurally deficient if it has been restricted to light vehicles, closed to traffic or requires rehabilitation. In 2008, 91.6% of Virginia's 20,837 bridges were rated fair or better (not structurally deficient) and that number has been stable the last few years.



Source: Department of Transportation, Dashboard

The fact that a bridge is rated structurally deficient does not imply that it is likely to collapse or that it is unsafe. It means that it must be monitored and inspected more often and may require additional maintenance.

Transit Vehicle Age

The Federal Transit Administration provides guidelines regarding transit vehicle replacement (12 years for vehicles and 25 years for locomotives). Virginia encourages transit operators to follow a rehabilitation program that extends the useful life of the vehicles beyond industry standards and to apply for new vehicles in advance of the deterioration of current assets.

In 2008, the average age of vehicles in Virginia's transit fleets improved to 6.7 years, down from 7.4 years in 2006, a 9% decrease. This average vehicle age is lower than a recently published national average of 9.4 years, indicating that Virginia's transit vehicles are newer, on average, than the industry standard.

Performance Summary

Grade = D

Performance Measure	Desired Trend	Performance Trend
Interstate Road Pavement Condition	↑	↓
Primary Road Pavement Condition	↑	↓
Secondary Road Pavement Condition	↑	↓
Bridge Condition	↑	→
Transit Vehicle Age	↓	↓

Goal: Mobility, Connectivity and Accessibility

Facilitate the easy movement of people and goods, improve interconnectivity of regions and activity centers, and provide access to different modes of transportation

Grade = C

Mobility can be defined as the capability of moving people or goods from place to place. Two related concepts are connectivity and accessibility, where connectivity refers to the linkage among regions and centers of activity, and accessibility addresses the ability of people or goods to reach destinations by different modes of transportation.

Performance Measures

- Number of Hours of Delay in Metropolitan Areas
- Number of Transit Trips Per Capita
- Number of Annual Transit Revenue Miles
- Average Number of People-Per-Lane Using High Occupancy Vehicle (HOV) Lanes
- Number of Park and Ride Lots and Spaces
- Percentage of Virginians Riding Bicycles to Work
- Percentage of Virginians Walking to Work
- Percentage of Intercity Rail Service Trains Arriving On Time
- Percentage of Freight Moved by Rail and Barge

Performance Highlights

- The Washington, DC Metropolitan Area, which includes Northern Virginia, was the second most congested metropolitan area in the United States in 2007, with 62 annual hours of delay per person
- HOV usage declined in 2008, after steadily increasing in previous years
- Transit ridership per capita has steadily increased since 2004, to just over 25 trips per year
- 36% of freight moving through the Port was transported by rail or barge, and has steadily increased in recent years

Strategies

- Implement High Occupancy Toll (HOT) initiatives
- Increase utilization of commuter assistance programs in Virginia's metropolitan areas to:
  - Reduce the rate at which single occupant vehicles are added to the roads
  - Increase transit ridership
- Provide additional Park and Ride lots and spaces for public use
- Promote ride-sharing (van and car pool), bike, and walk-to-work programs
- Utilize Safety Service Patrol program to enhance incident management and reduce clearance times

- Continue to use the "511" Traveler Information Service to provide incident, average travel time, and alternate route information to the traveling public
- Promote Telework and Alternate Schedule initiatives to reduce peak-travel time traffic

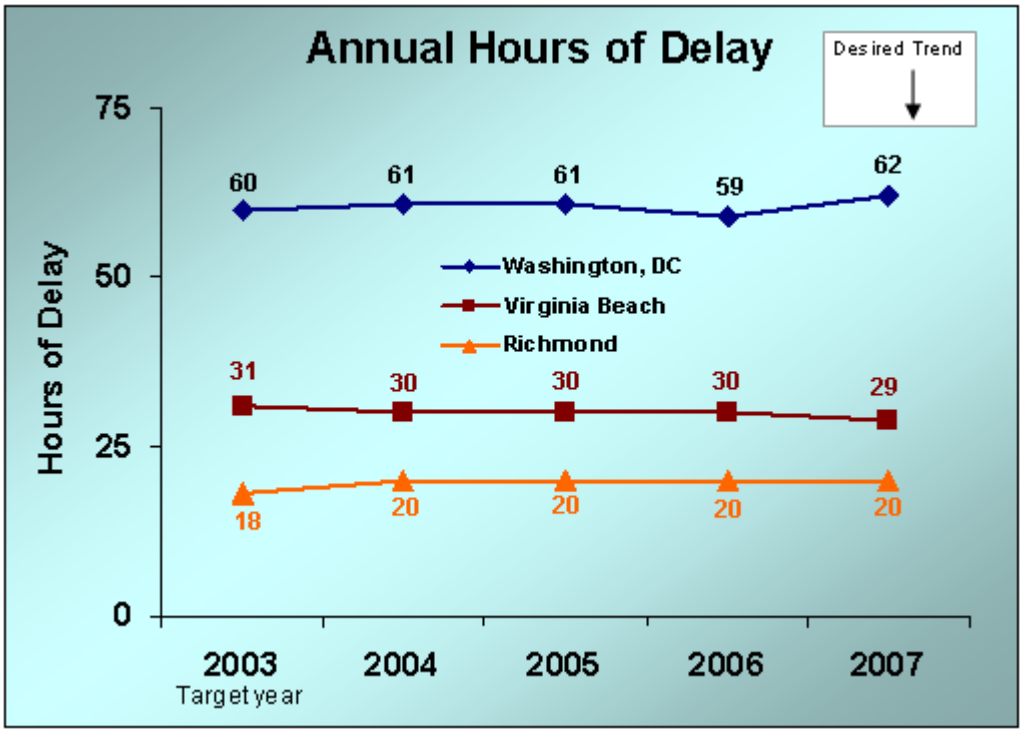
Hours of Delay

The Texas Transportation Institute (TTI) reported in its 2009 Urban Mobility Report that, in 2007, the typical Washington, DC area daily traveler needed 39% more time to get to his or her destination during peak travel periods, costing the region over $2.7 billion in lost productivity and wasted fuel. In 2007, each traveler in the DC area wasted 62 hours sitting in traffic; that was 11 hours more than the average for the nation's 26 largest cities, and 21 hours more than the national average of all 90 major urban areas covered by TTI's report. Each DC area traveler consumed an additional 42 gallons of gasoline per year in these congestion related delays. It is important to note that while TTI's latest report was released in the summer of 2009, it contains data from 2007.

Travel delay is measured as the extra travel time required over and above what would be experienced during free flow traffic conditions. Travelers in Richmond and Virginia Beach experienced delay lower than the national average, with delay levels remaining flat from 2004 through 2007 and with Virginia Beach showing slight improvement in 2007. The Washington, DC area had the second worst level of delay in the nation behind only the Los Angeles metro area.

In 2007, travelers in the Washington, DC area experienced an average of sixty two hours of traffic delay

The Commonwealth's goal is to mitigate the per-traveler level of peak period congestion delay, measured as an annual total, to at least the level of delay experienced by travelers in 2003 which were: 60 hours per year in the Washington DC/Northern Virginia metro area, 31 hours in the Hampton Roads metro area and 18 hours in the Richmond area.

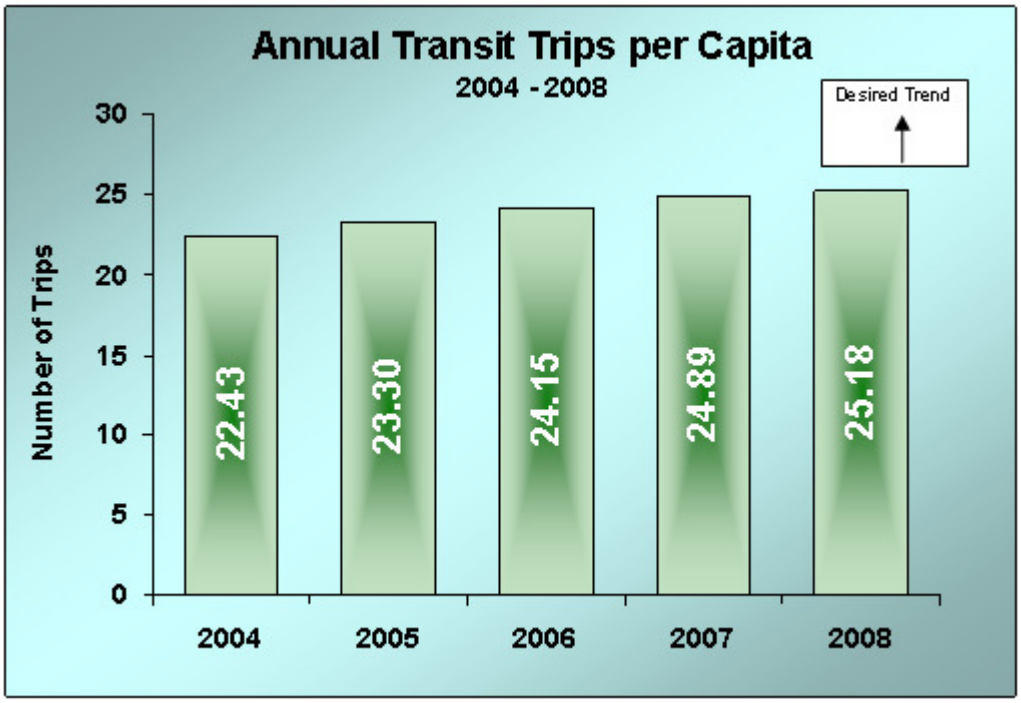


Source: Texas Transportation Institute, 2009 Urban Mobility Report

Transit Trips per Capita

Transit is an essential part of the transportation network in many areas of the Commonwealth and provides mobility and travel choices for Virginia's citizens and visitors. Transit ridership has increased each year since 2004 and the number of trips made on transit in the areas served by the 56 transit operators averaged just over 25 trips per Virginia resident in 2008.

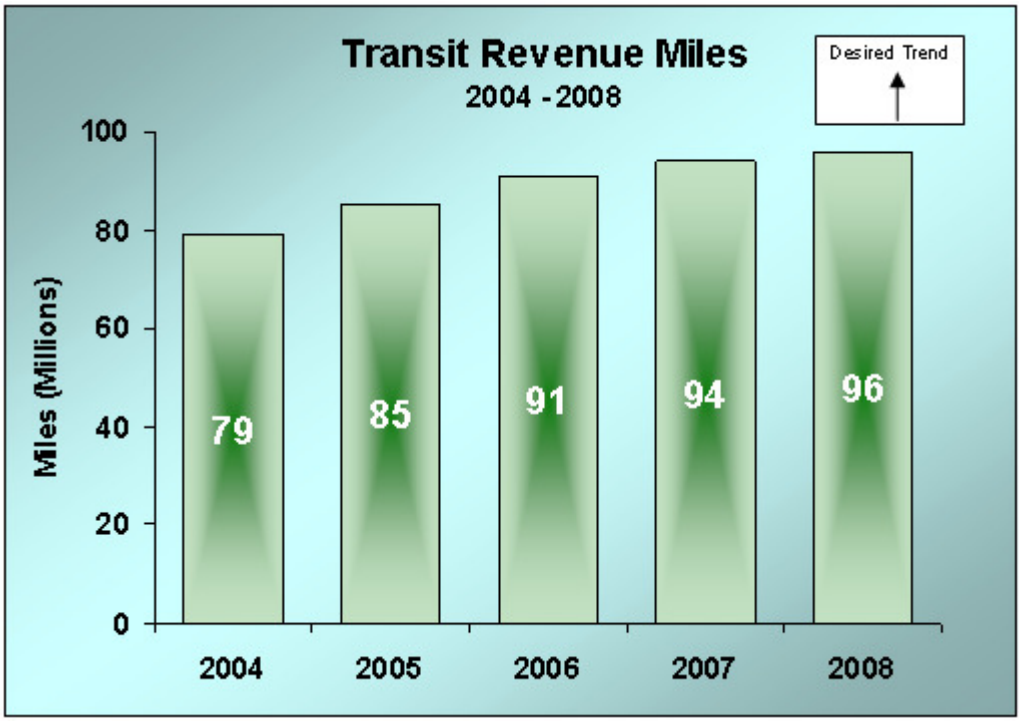
Transit relieves congestion and reduces delay by removing vehicles from the roadways. If public transportation were discontinued in Virginia, the 196 million transit trips made in 2008 would have been made in automobiles or not at all.



Source: Department of Rail and Public Transportation

Transit Revenue Miles

Transit revenue miles, or the miles traveled when the transit vehicle is in revenue service, increased to 96 million in 2008 which is an increase of 2.3% from the previous year when the Department of Rail and Public Transportation recorded over 94 million revenue miles. This measure is often considered an indicator of transit availability.



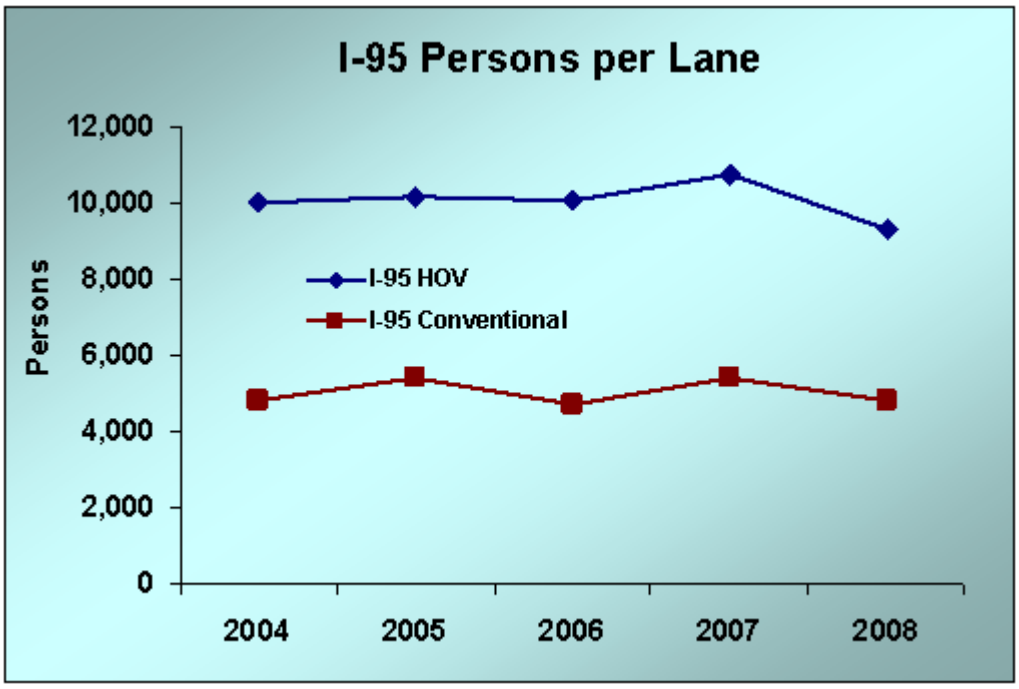
Source: Department of Rail and Public Transportation

HOV Use

Virginia has an extensive High Occupancy Vehicle (HOV) system in the Northern Virginia (NoVA) and Hampton Roads areas with over 137 miles of interstate lanes dedicated to carpools and buses during peak hours. However, the facilities differ in design and effectiveness. The Northern Virginia facilities on I-95/I-395 are separated from the conventional lanes by cement barriers and require three or more persons per vehicle. In Hampton Roads, the HOV lanes allow for two or more persons; some sections are separated by barriers from conventional lanes, some are not.

In a Northern Virginia survey performed in the Fall of 2008 taken between 6:00AM and 9:00AM on the outer loop of the Beltway, one I-95 HOV lane carried an average of 9,348 people per lane, while one conventional lane carried 4,801 people. From 2007 to 2008, in conjunction with the economic downturn, the number of persons carried per lane decreased in both HOV and conventional lanes.

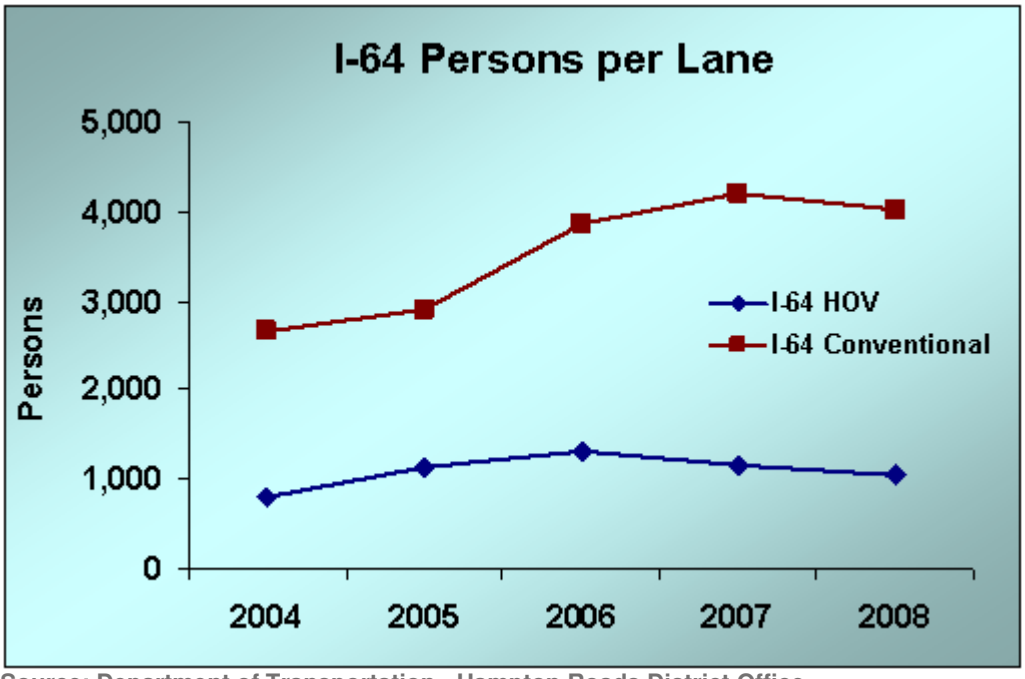
I-95



Source: Department of Transportation - Northern Virginia District Office

Similarly, a 2008 survey in Hampton Roads taken between 6:00AM and 8:00AM on a westbound segment of I-64, found that one I-64 HOV lane carried an average of 1,053 people while one conventional lane carried 4,014. As experienced in Northern Virginia, from 2007 to 2008 the number of persons carried per lane decreased in both HOV and conventional lanes

I-64



Source: Department of Transportation - Hampton Roads District Office

In 2008, carpoolers in Northern Virginia saved almost 25,000 hours each AM peak period while those in Hampton Roads saved about 2,200 hours.

Virginia has begun construction of High Occupancy Toll (HOT) lanes on the I-495 Capital Beltway in Northern Virginia. HOT lanes price travel based on the level of congestion by setting the fee to use the HOT lanes at a level that maximizes usage while keeping traffic flowing freely, thereby efficiently allocating road capacity based on market demand. As HOT lanes become congested, the toll increases. When completed in 2013, the project will provide two HOT lanes in each direction stretching 14 miles from the Springfield Interchange to just north of the Dulles Toll Road. HOV-3 vehicles and buses will be able to ride free while non-HOV vehicles will pay a variable toll to use the facility. In the future, these HOT lanes will connect with HOV lanes on I-95, HOV lanes on I-66 and the Dulles Toll Road to provide a seamless HOV network in the region.

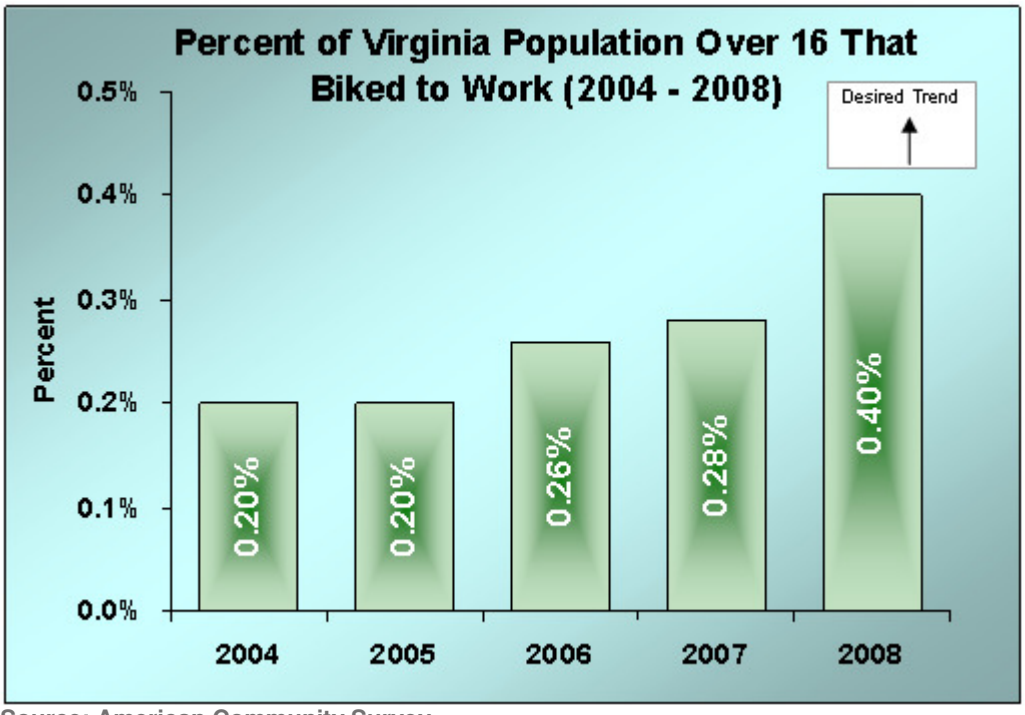
Park and Ride Spaces

There are approximately 330 Park and Ride lots statewide (114 lots owned by VDOT, 26 owned by local jurisdictions, transit companies, local colleges, etc., and approximately 189 lots that are "unofficial"). These lots provide nearly 63,500 spaces, an 8% increase from about 59,000 in 2007. Transit serves 139 lots containing approximately 46,500 spaces.

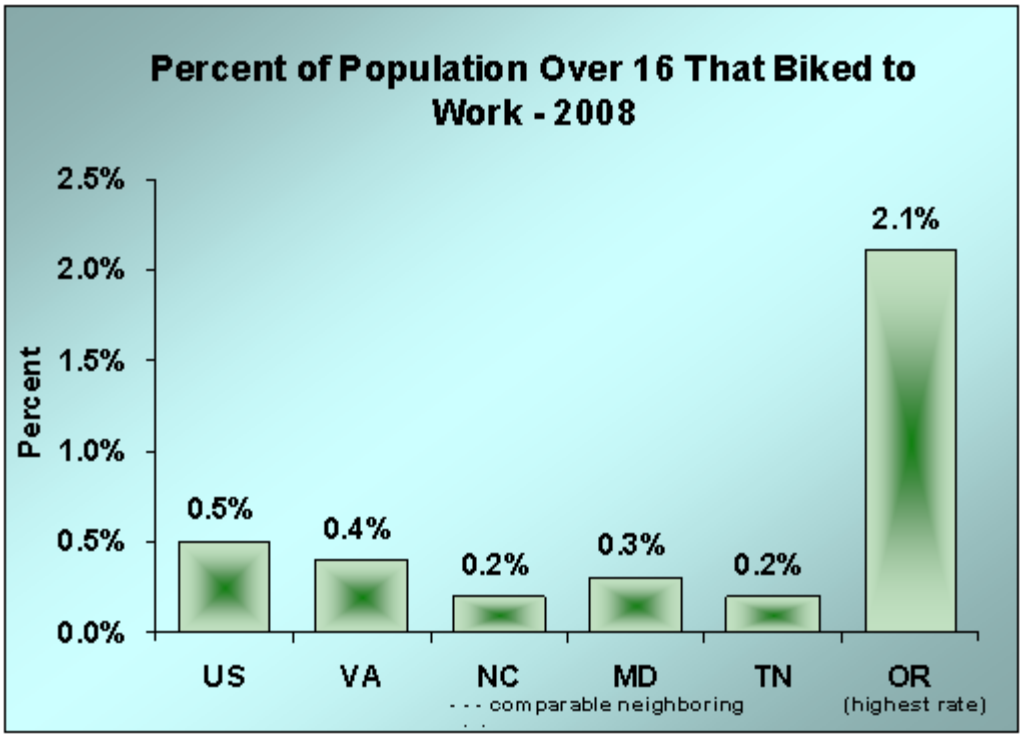
Bicycle Travel

Virginia continues to be a leader in the miles of numbered Bicycle Routes (USBR) with a total of 838 miles representing over 41% of the nation's total USBRs. In 2004, the Commonwealth developed a State Bicycle and Pedestrian Policy that requires VDOT to initiate all highway construction projects with the assumption that they will accommodate bicycling.

Based on the 2008 American Community Survey (ACS), which is administered by the US Census, 0.4% of Virginia citizens over 16 rode a bicycle to work, an increase from 0.28% in 2006. This is lower than the national average of 0.5%.



Source: American Community Survey

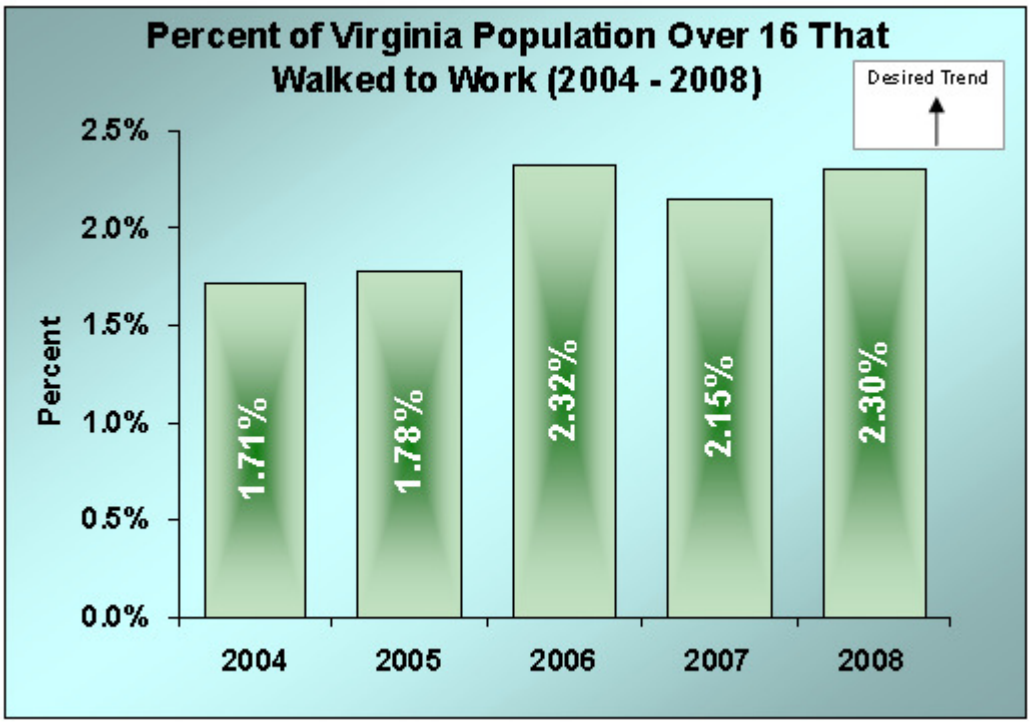


Source: American Community Survey,

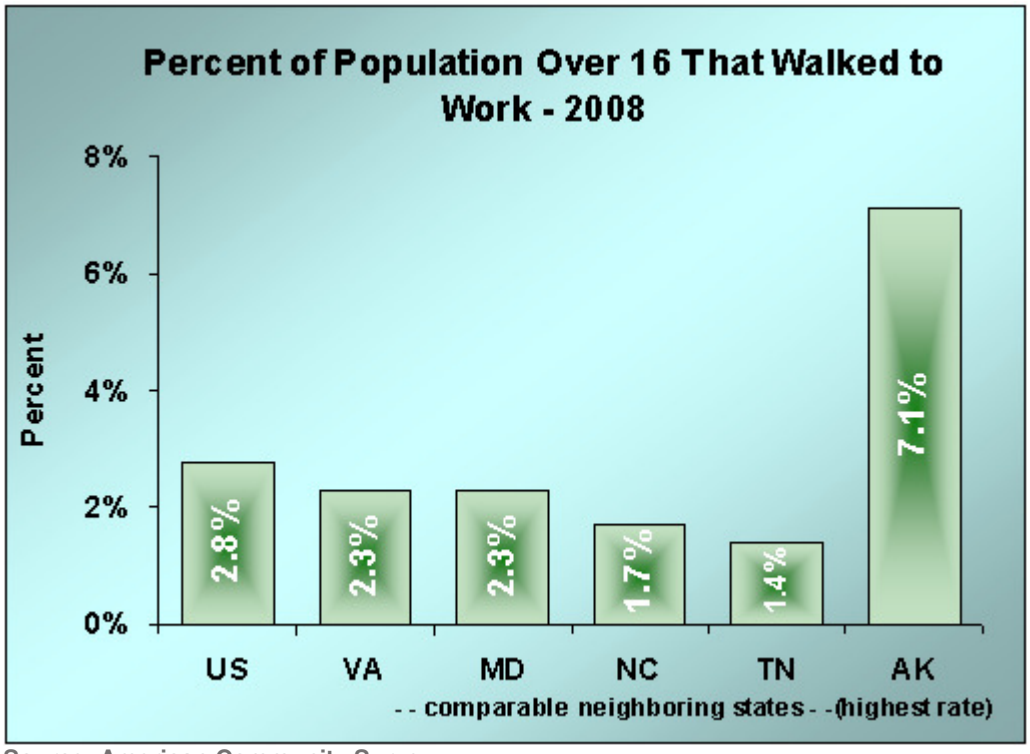
Pedestrian Travel

In 2008, VDOT estimates that over 129 miles of subdivision street sidewalks were made available for public use bringing the total estimate of miles added over the last six years to more than 550.

The 2008 ACS indicates that 2.3% of Virginia's population walked to work, just below the national average. Not surprisingly, more people walk to work in the large metropolitan areas; both the Washington, DC and the Hampton Roads regions exceed the statewide percentage.



Source: American Community Survey



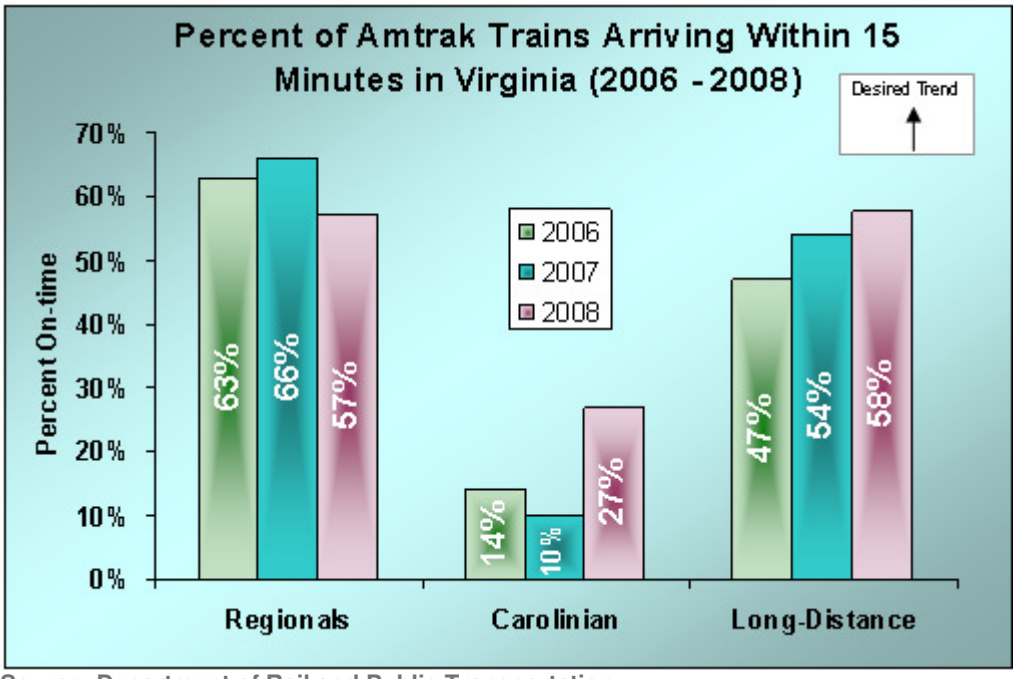
Source: American Community Survey

Intercity Rail Service

In 2008, Amtrak operated 20 daily roundtrip trains and two additional trains that offer service three days a week. Six of these trains are considered long-distance, five of which run from New York City and pass through Virginia before terminating in such places as Miami and Chicago. The Carolinian is a separate route which runs from New York to Newport News, VA. The remaining Amtrak routes provide service from locations within Virginia to Washington, DC's Union Station. In 2008, 1,050,017 passengers either boarded or alighted within the Commonwealth, up 13% from 929,594 in 2007.

On-time performance for the Carolinian and long-distance trains improved in 2008 over the previous year, but still falls short of the on-time performance targets that Amtrak has set for its trains. According to the Amtrak National Fact Sheet, the on-time goal for the Northeast Corridor is an 85% on-time rate while the goal for all service types is an 80% rate.

In Virginia, Amtrak operates on infrastructure owned and operated by freight railroad companies. The poor performance of Amtrak is due mostly to the priority accorded freight trains on these tracks. In addition to addressing performance, DRPT is working to leverage additional train service in Virginia through targeted investment.

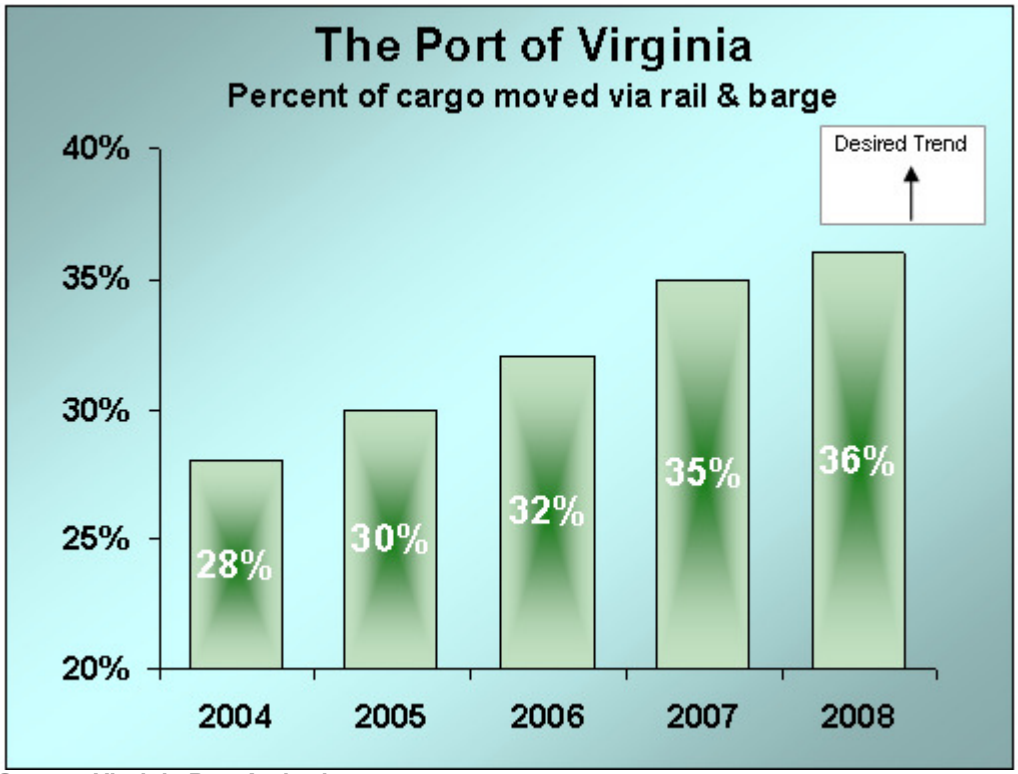


Source: Department of Rail and Public Transportation

Freight Moved Through the Port of Virginia by Rail or Barge

The majority of freight moving in and out of the Port of Virginia is currently transported by truck. To encourage intermodal activity, the Virginia Port Authority (VPA) has established a rail target of 50% at the Craney Island facility

In 2008, 31% of goods moved through the Port via rail (up from 24% in 2005), the fastest growing segment of the Port's business, and 36% were moved by a combination of rail and barge modes.

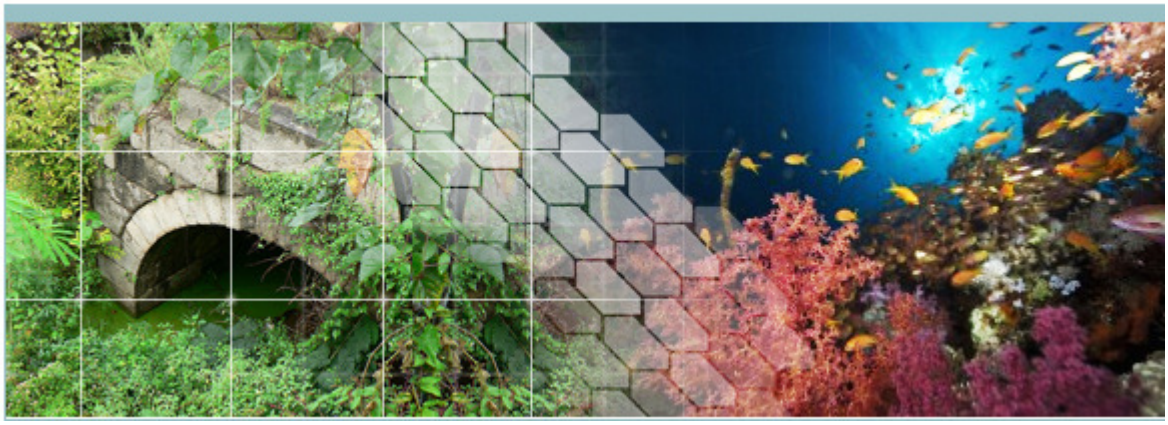


Source: Virginia Port Authority

Performance Summary

Grade = C

Performance Measure		Desired Trend	Performance Trend
Annual Hours of Delay	Hampton Roads / Virginia Beach	↓	↓
	Northern Virginia	↓	↑
	Richmond area	↓	→
Transit Trips per Capita		↑	→
Transit Revenue Miles		↑	↑
HOV Usage	Hampton Roads / Virginia Beach	↑	↓
	Northern Virginia	↑	↓
Park and Ride Spaces		↑	↑
Bicycle Travel		↑	→
Pedestrian Travel		↑	→
Intercity Rail Service		↑	→
Port of Virginia Rail & Barge Cargo		↑	↑



Goal: Environmental Stewardship

Protect the environment and improve the quality of life for Virginians

Grade = A

The purpose of a transportation system is to link regions and service communities and to facilitate the seamless movement of people and goods throughout the state. A major challenge for any transportation agency is to determine how to construct, maintain and operate the system without compromising natural, cultural or historic resources. The goal of environmental stewardship is to design and operate the transportation system in a manner that enhances communities, protects Virginia's natural resources, reduces pollutants and greenhouse gas emissions, and conserves energy.

Performance Measures

- Tons Per Year of Mobile Source Emissions
- Tons Per Year of Transportation Sector Greenhouse Gas Emissions
- Fuel Usage Per Capita
- Acres of Wetlands Replaced

Performance Highlights

- Mobile source emissions continue to decrease
- Transportation sector greenhouse gas emissions decreased from 2007 to 2008
- Wetlands continue to be replaced faster than they are affected by transportation construction
- Fuel usage per capita decreased

The Port of Virginia is the first port on the east coast to be ISO 14001 certified for its environmental management system.

Strategies

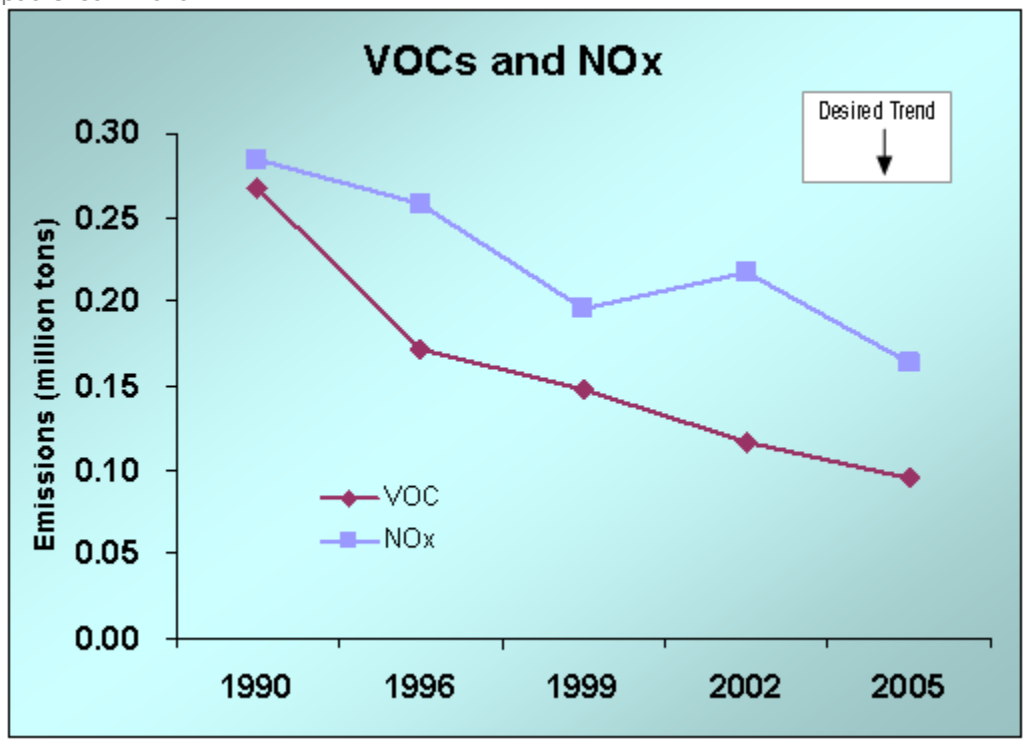
- Promote transportation demand management programs
- Continue to support emission reduction strategies at the Port of Virginia
- Develop initiatives to make and market Virginia as "hybrid friendly"
- Evaluate cost effectiveness of accelerating the electrification of truck stops and adoption of idling technology
- Expand frequency and scope of transit and rail services
- Encourage pedestrian and bicycle improvements
- Encourage local and regional land use patterns that minimize GHG emissions
- Continue to promote telework and flextime standards

Mobile Source Emissions

Since 1990, volatile organic compounds (VOC) and nitrogen oxides (NOx) emitted into the air from highway vehicles have continued to decrease due to cleaner vehicles entering the fleet each year, increased transit use, increased teleworking, and better land use planning. EPA recently implemented significantly cleaner emissions standards for passenger cars, sport-utility vehicles, and heavy diesel trucks, and also mandated the use of low sulfur gasoline and diesel.

One of the source emissions is ozone. In 2008, the number of ozone exceedance days statewide was 26, down from 46 in 2007. These are days on which the level of ozone in the atmosphere is considered unhealthy by the EPA.

The most recently published report includes actual results through 2005, and the next report is expected to be published in 2010:

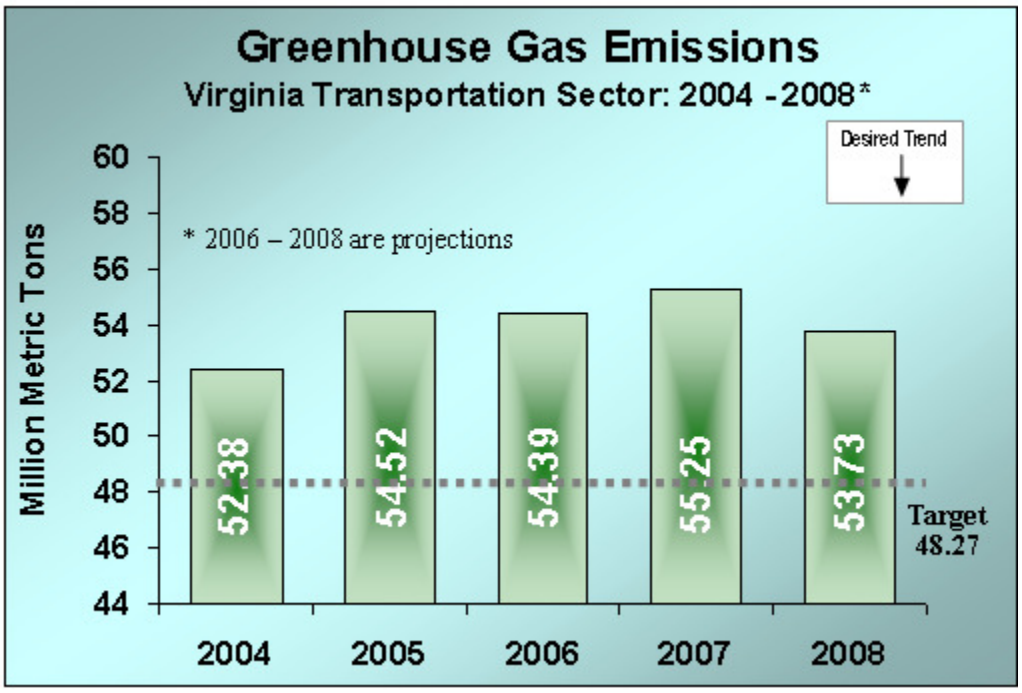


Source: Department of Environmental Quality, 2008 data unavailable as of October 1, 2009

Greenhouse Gas Emissions

Virginia's transportation sector is the largest energy-using sector in the state, accounting for approximately 42% of the total energy used in Virginia (2007). Transportation sources are estimated to have emitted 53.73 million metric tons of GHGs (CO_2 equivalents) in 2008, roughly 1/3 of overall GHG emissions in the Commonwealth. Levels of GHG emissions from transportation sources are affected by the fuel efficiency of the vehicle fleet, the types of fuel used, the number of vehicle miles traveled and traffic operations.

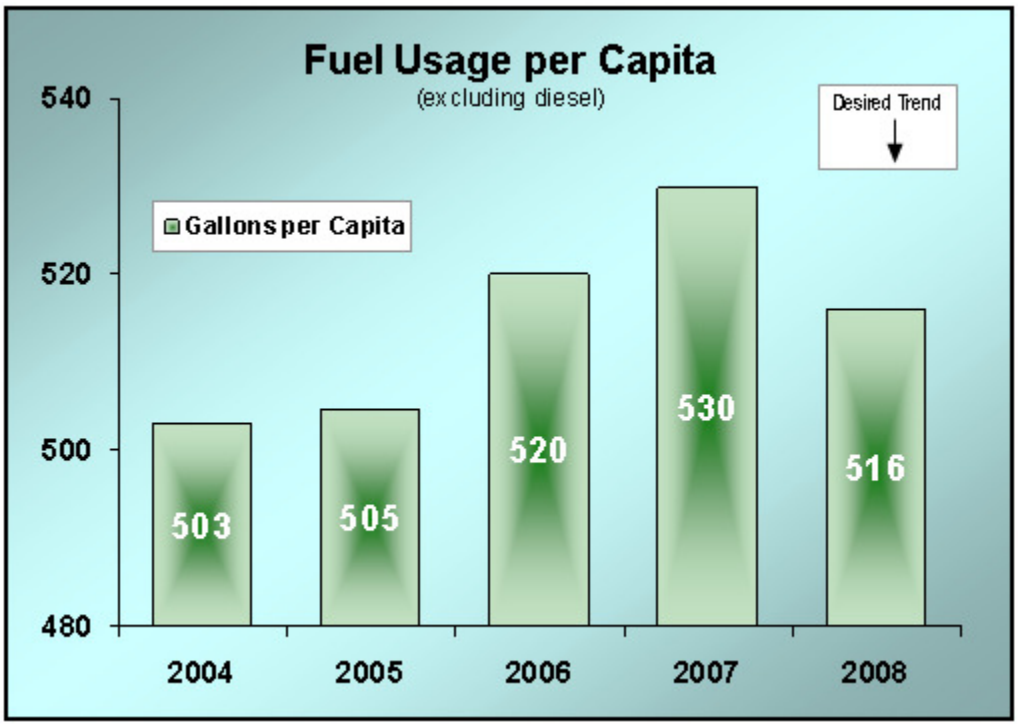
According to the Department of Environment Quality's latest estimates, GHG emissions from transportation sources are projected to increase 35% to over 78.3 metric tons by 2025, however lower fuel consumption levels in 2008 led to significantly lower GHG emissions than had been expected. Governor Kaine's Executive Order 59 (2007) set a goal of reducing GHG emissions from all sources to 2000 levels by 2025.



Source: Department of Environmental Quality – Air Division, Inventory And Projection Of Greenhouse Gas Emissions (2000 – 2025), December 2008.

Fuel Usage per Capita

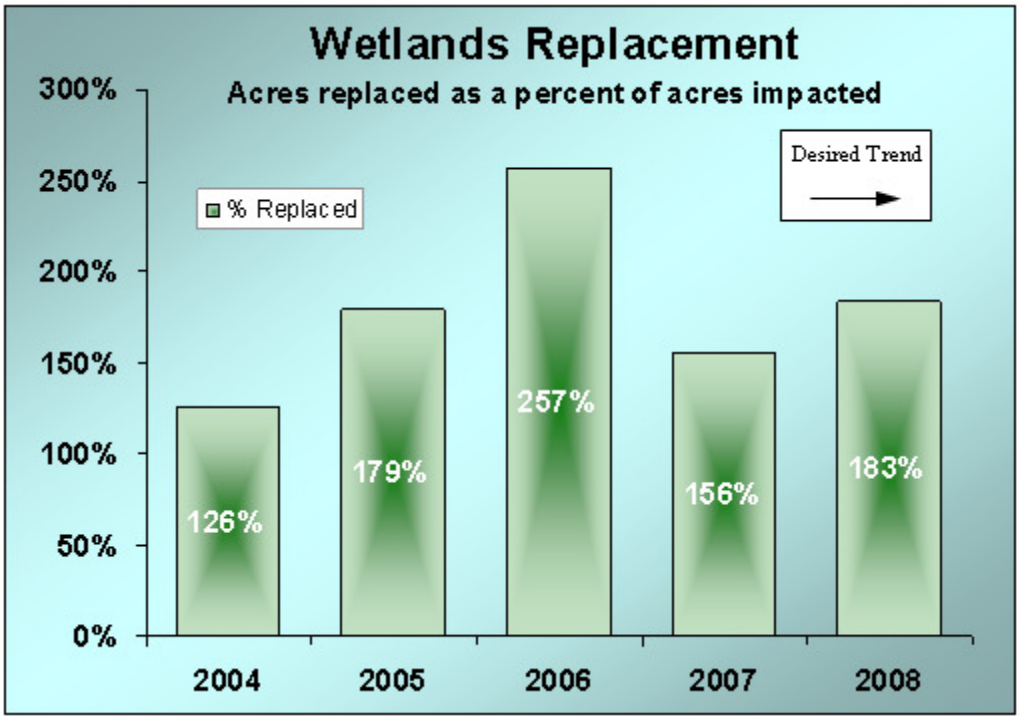
A decrease in this measure is associated with improved air quality, lower GHG emissions, and more efficient use of resources. While a decrease in fuel usage is essential to addressing the threat of climate change, it is worth noting that the fuel tax is the major revenue source supporting transportation programs. In 2008, Virginians consumed 516 gallons of fuel per capita. According to the most recent data from the U.S. Census Bureau, Virginia ranked 13th in national per capita fuel consumption rankings in 2007. Wyoming ranked first with 692 gallons per person, while New York ranked 50th at just 215 gallons.



Source: Department of Taxation, The Weldon Cooper Center

Wetlands Replacement

Historically, Virginia has overcompensated in replacing wetlands lost to roadway construction. In 2008, Virginia restored 83% more wetlands than were impacted. In general, from 2004 through 2008, Virginia replaced 75% more acres of wetlands each year than were impacted. The desired ratio is to be greater than 1:11.



Source: Department of Transportation – Environmental Division

Performance Summary

Grade = A

Performance Measure	Desired Trend	Performance Trend
Mobile Source Emissions	↓	↓
Greenhouse Gas Emissions	↓	↓
Fuels Usage per Capita	↓	↓
Acres of Wetlands Replaced	→	→

Measures

Transportation Contribution to Gross State Product

Transportation Sector Employment

Freight Shipped Through the Port of Virginia

Port of VA's Share of East Coast Market

Enplanements at Air Carrier Airports

Small, Women and Minority Owned Businesses (SWaM)

Performance Summary

Print Section

Goal: Economic Vitality

Provide a transportation system that supports economic prosperity

Grade = C

Despite a strong economic history and business friendly environment, Virginia, like the rest of the country, struggled in 2008. The recession, which, according to the National Bureau of Economic Research, began in December 2007, has been called the worst economic downturn since the Great Depression. It has taken its toll on the Commonwealth and its transportation system, and its effects are sure to linger for years to come.

However, Virginia has had a vibrant and growing economy - ranked 11th in the nation in 2008 - due in large part to the Commonwealth's extensive network of highways, airports, ports, bus and rail facilities. The transportation network has attracted businesses and people, provides access to markets, reduces the cost of doing business, creates new business opportunities, and increases individual and business productivity.

Performance Measures

- Value of the Transportation Sector's Contribution to Gross State Product (real dollar valuation)
- Number of Workers Employed by Virginia's Transportation Sector
- Volume of Freight Shipped Through the Port of Virginia in Twenty-Foot Equivalent Units (TEUs)
- Port of Virginia Share of Volume (in TEUs) Shipped Through East Coast Ports
- Number of Enplanements at Virginia's Air Carrier Airports
- Percentage of Transportation Discretionary Expenditures on Small, Women and Minority Businesses

Performance Highlights

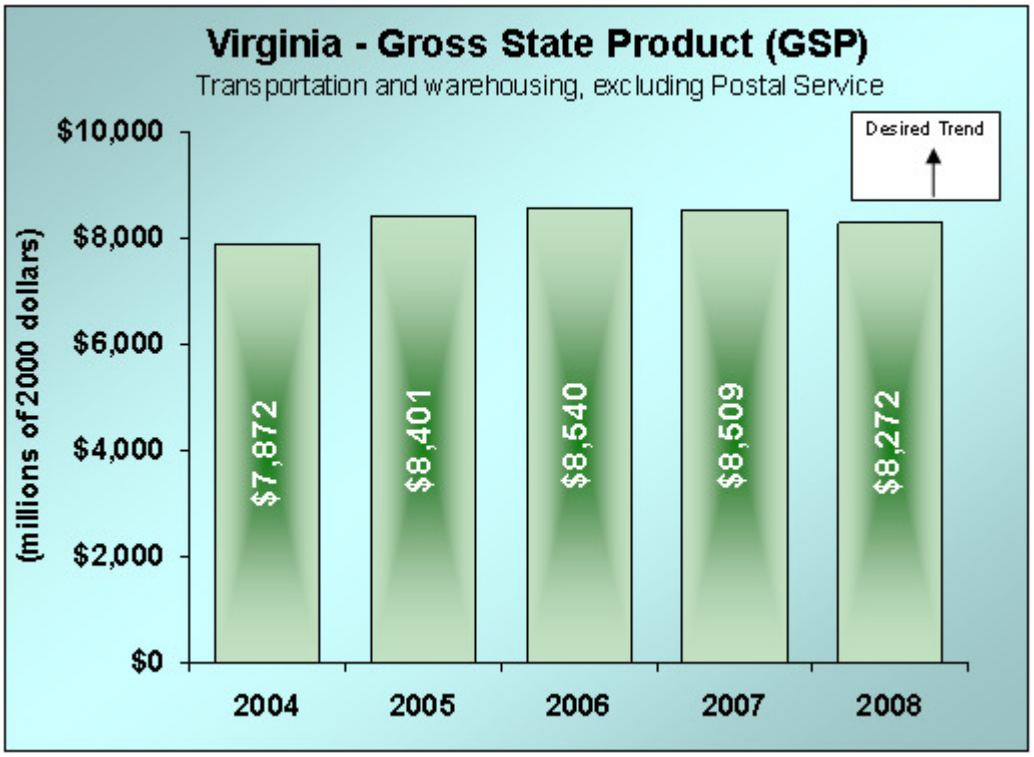
- Virginia's transportation sector contributed $8.3 billion to Gross State Product, a decrease from $8.5 billion
- Virginia's transportation sector employment decreased from 137,000 in 2007 to 136,000 in 2008
- Shipments through the Port of Virginia decreased from 2.13 million TEUs in 2007 to 2.08 million in 2008
- The Port of Virginia's market share of East Coast TEUs held steady at about 16%
- The number of enplanements decreased by 4% to about 24.5 million
- $643.3 million, representing 40.1% of the $1.640 billion in discretionary expenditures done by state transportation agencies, was with Small, Women- and Minority-Owned Businesses (SWaM)

Strategies

- Increase TEU capacity at terminals
- Reduce terminal dwell time for containers
- Meet or exceed technology implementation project schedules
- Increase percentage of freight tonnage handled by rail
- Require prime contractors to submit SWaM contracting plans
- Implement small business set-aside solicitations
- Require and implement SWaM training programs

Transportation Sector Economic Contribution

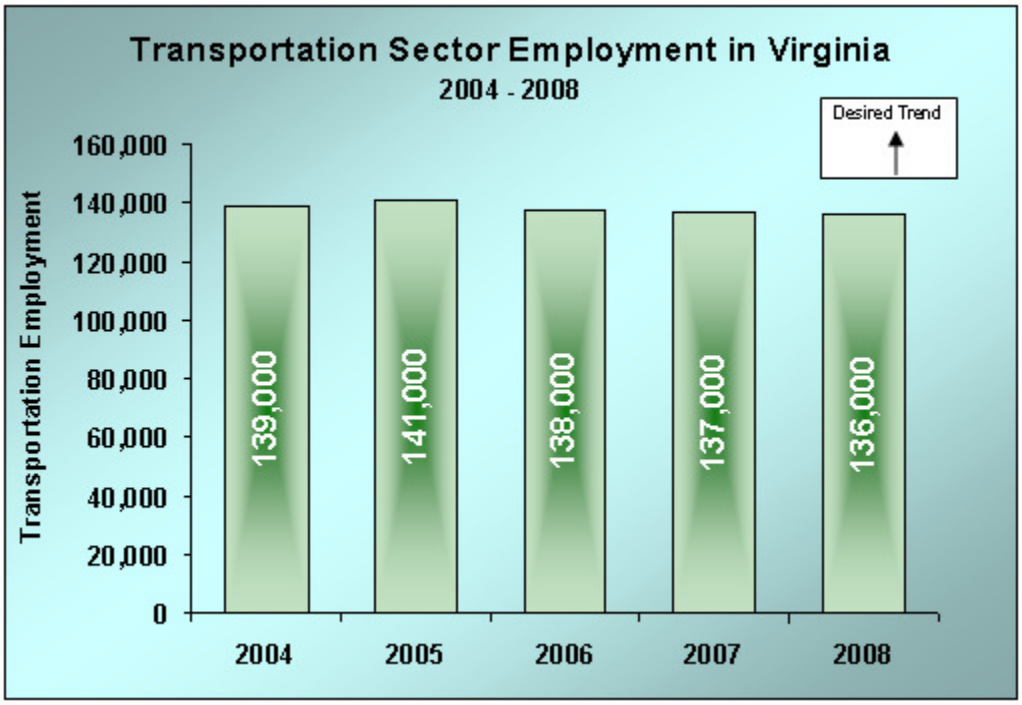
Gross State Product (GSP) is the Bureau of Economic Analysis (BEA) term for the estimation of individual state Gross Domestic Product (GDP). BEA estimates that, in real dollars, Virginia's transportation industry currently adds about $9.5 billion to the state's annual GSP. transportation's "Real Dollar" contribution to the Virginia GSP rose through 2006 and declined in 2007 and 2008:



Source: Bureau of Economic Analysis, U.S. Department of Commerce

Transportation Sector Employment

Employment is one indicator of the overall contribution and strength of a particular sector of the economy; changes in employment levels signal whether the sector is expanding or contracting. According to Virginia Employment Commission data, employment in the transportation sector (direct employment, excluding warehousing and storage) peaked in 2000 and has been trending downward ever since.

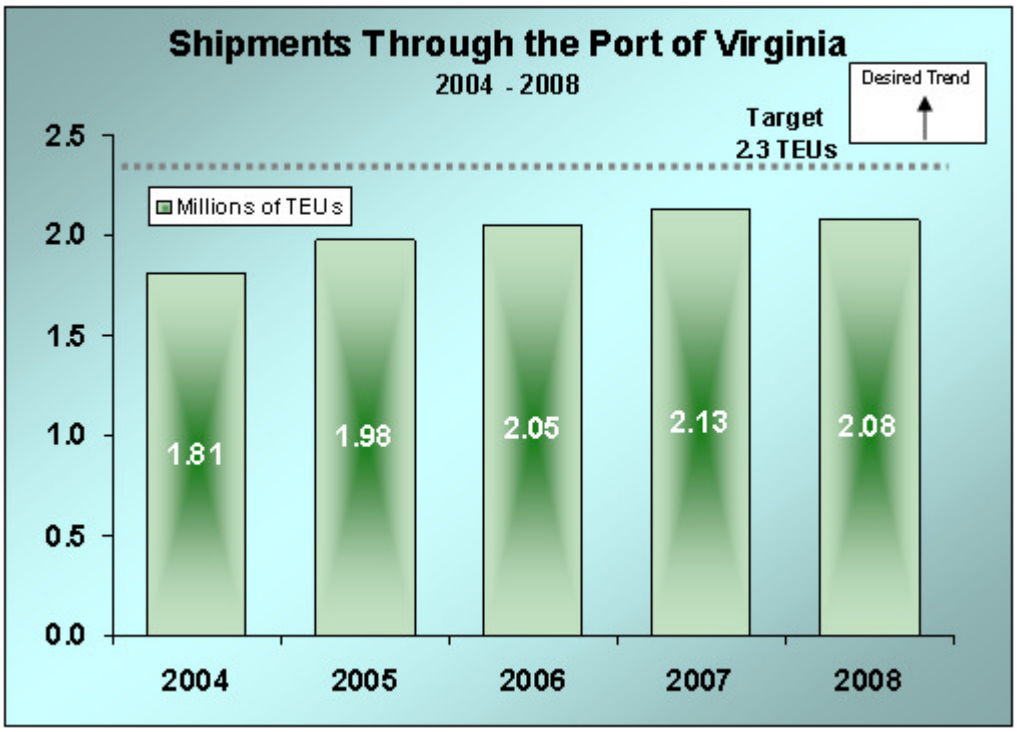


Source: Virginia Employment Commission

Freight Shipped Through the Port of Virginia

The Port of Virginia is the third largest port on the East Coast, trailing New York/New Jersey and Savannah, Georgia, and makes up about 5% of the entire U.S. market share. The average annual growth rate in containerized cargo through the Port has increased 8% per year (inclusive of the new APM Terminal). In 2008, 2.08 million TEUs passed through the Port's four terminals, down from 2.13 million units in 2007, a 2.1% drop. To accommodate projected future growth, the Virginia Port Authority (VPA) plans to renovate and expand existing facilities, including construction of the new Craney Island Marine Terminal. This terminal is scheduled to open its first phase in 2020.

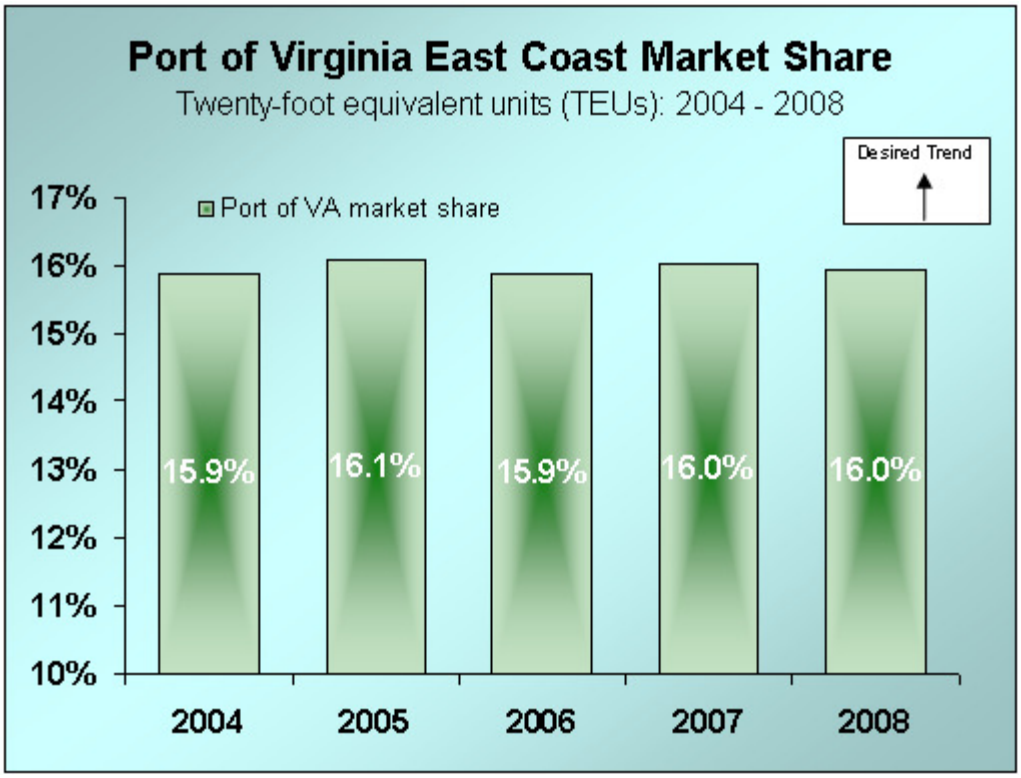
Twenty-foot equivalent units (TEUs) are used as the standard of measurement for shipping containers of various lengths and for describing the capacities of terminals. For instance, one standard forty-foot container equals two TEUs.



Source: Virginia Port Authority

Port of Virginia's Share of East Coast Port Cargo

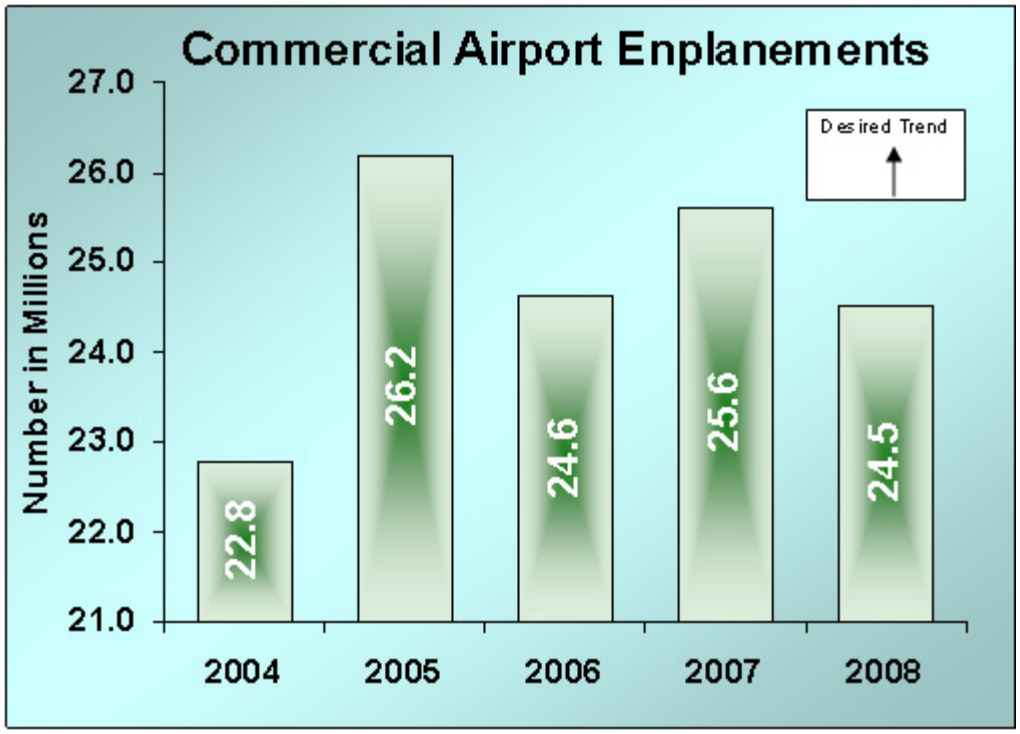
The Port competes against six other container ports on the east coast: the Ports of Baltimore, Charleston, Miami, New York/New Jersey and Savannah. In 2008, the Port of New York/New Jersey was the largest with 5.2 million TEU's and 40% of the East Coast market. The Port of Savannah followed with 2.6 Million TEUs and 20% of the market. Virginia's share has remained stable at roughly 16% of the market over the six years.



Source: Virginia Port Authority, Business Analysis and Strategy

Enplanements at Air Carrier Airports

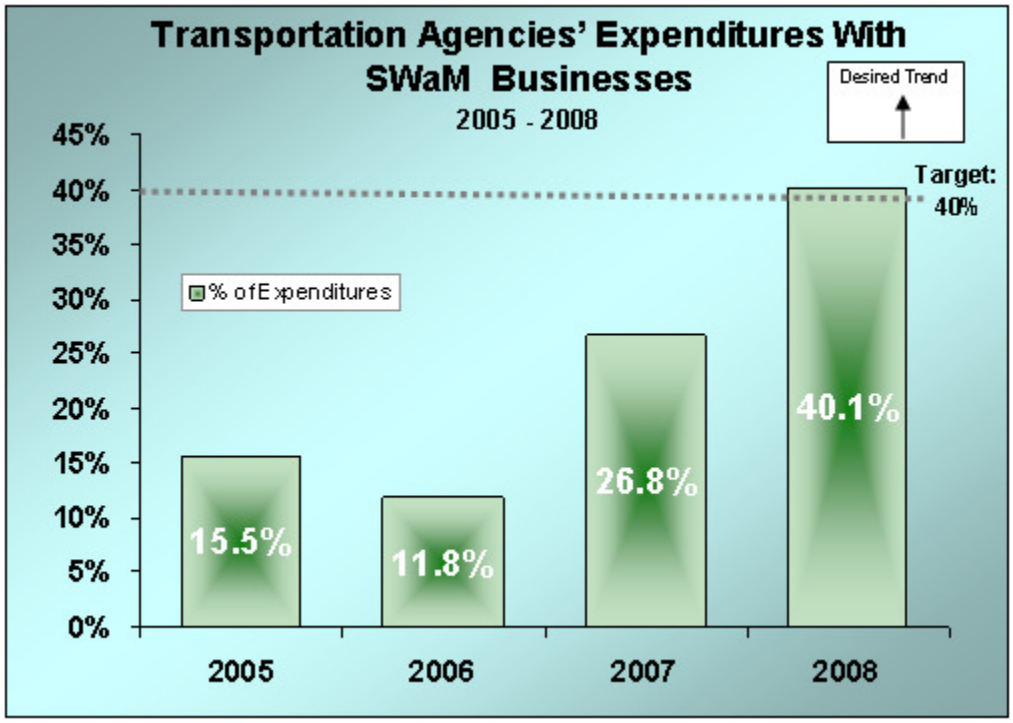
In 2008, according to FAA preliminary data, there were 24.5 million enplanements at the nine air carrier airports in Virginia. This represents a 4% drop from 2007. Virginia's busiest airport, Dulles International, handled 1.5% of the total U.S. enplanements and was the 21st busiest airport in the nation. Nevertheless, all of the Commonwealth's air carrier airports reported decreases in enplanements.



Source: Department of Aviation (preliminary 2008)

Transportation Expenditures on Small, Women and Minority Owned Businesses (SWaM)

Providing businesses with an equal opportunity to contract for a share of the Commonwealth's discretionary expenditures is critical to fairness and to increasing competition. Executive Order 33 (2006) establishes 40% as the goal for statewide discretionary spending with SWaM businesses. For fiscal year 2008, total discretionary expenditures by all state government agencies amounted to $4.9 billion, of which transportation agencies accounted for $1.6 billion (33%). Transportation agencies spent $643.8 million (40.1%) with SWaM businesses, meeting the Governor's target.



Source: Department of Minority Business Enterprise

Performance Summary

Grade = C

Performance Measure	Desired Trend	Performance Trend
Transportation Sector Economic Contribution	↑	↓
Transportation Sector Employment	↑	→
Freight Shipped Through the Port of Virginia	↑	↓
Port of Virginia's Share of East Coast Port Cargo	↑	→
Enplanements at Air Carrier Airports	↑	↓
Expenditures with Small, Women and Minority Owned Businesses (SWaM)	↑	↑

Measures

Jobs-Housing Balance

Population Density

Vehicle Miles Traveled

Performance Summary

Print Section

Goal: Transportation and Land Use

Facilitate the effective coordination of transportation and land use plans and decisions to promote livable communities

Grade = C+

Effective coordination of transportation and land use is essential to a sustainable transportation system. Decisions about land use, which affect how land is zoned and developed, also determine the transportation needs of an area. More specifically, these decisions affect the level of mobility and accessibility in a region, the viability of different modes, and the overall efficiency of transportation facilities and services. Effective land use can also help reduce strain on existing infrastructure, lower emissions, and produce maximum return on investment.

Performance Measures

- Ratio of Jobs to Housing (Jobs/Housing Balance) in Metropolitan Areas
- Number of People per Square Mile (Population Density) in Metropolitan Areas
- Number of Daily Vehicle Miles Traveled Per Capita

Performance Highlights

- Jobs and housing are not equally balanced but the ratio is trending down
- Overall statewide population density has held steady while density in both Northern Virginia and the Richmond regions has increased
- Overall average statewide daily vehicle miles traveled (DVMT) per capita decreased or stabilized, while DVMT in Northern Virginia and Hampton Roads regions increased.

In 2009 the Commonwealth Transportation Board adopted the secondary street acceptance requirements to ensure that streets accepted for perpetual public maintenance provide adequate public benefits. New developments will need to have multiple connections to the existing street network and provide pedestrian accommodations helping to reduce the burden on major highways.

Strategies to improve Jobs/Housing ratio:

- Promote transit-oriented development
- Provide transportation funding to areas with compatible land use and transportation plans
- Assist localities and regional governments with developing compatible transportation and land use plans
- Promote mixed-use development that places work locations closer to housing
- Support policies to increase affordable housing near employment centers

Strategy to increase population density in metropolitan areas:

- Facilitate more dense zoning through model ordinances and pilot projects illustrating the greater sustainability of higher density land use patterns at a variety of scales (e.g.; urban, suburban and rural)

Strategies to reduce VMT:

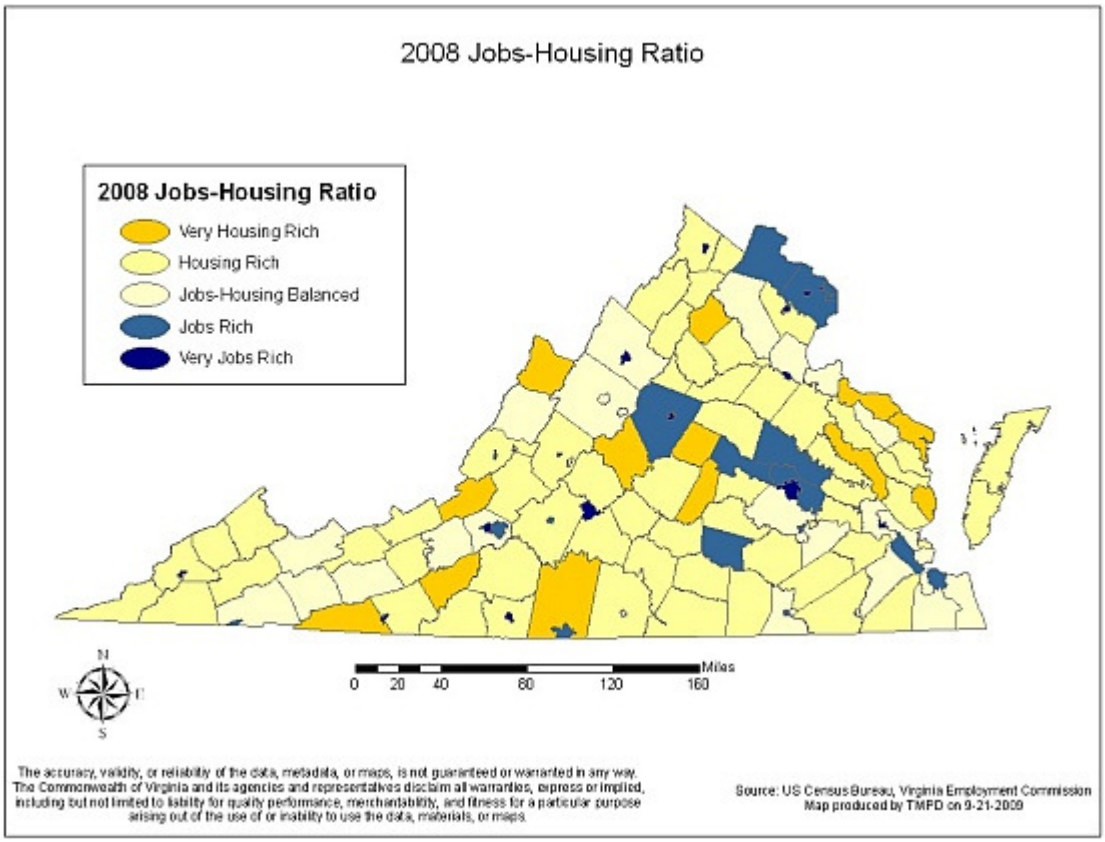
- Promote transportation demand management programs
- Increase transit service
- Provide sidewalks and bicycle facilities
- Promote teleworking, ridesharing, and alternative work schedules

Jobs/Housing Balance

The jobs/housing balance indicates the ratio of available housing to available jobs within a geographic area. A poor jobs/housing balance may mean that workers are unable to live close to where they work, which contributes to longer commutes, increased traffic congestion, and more rapid deterioration of infrastructure.

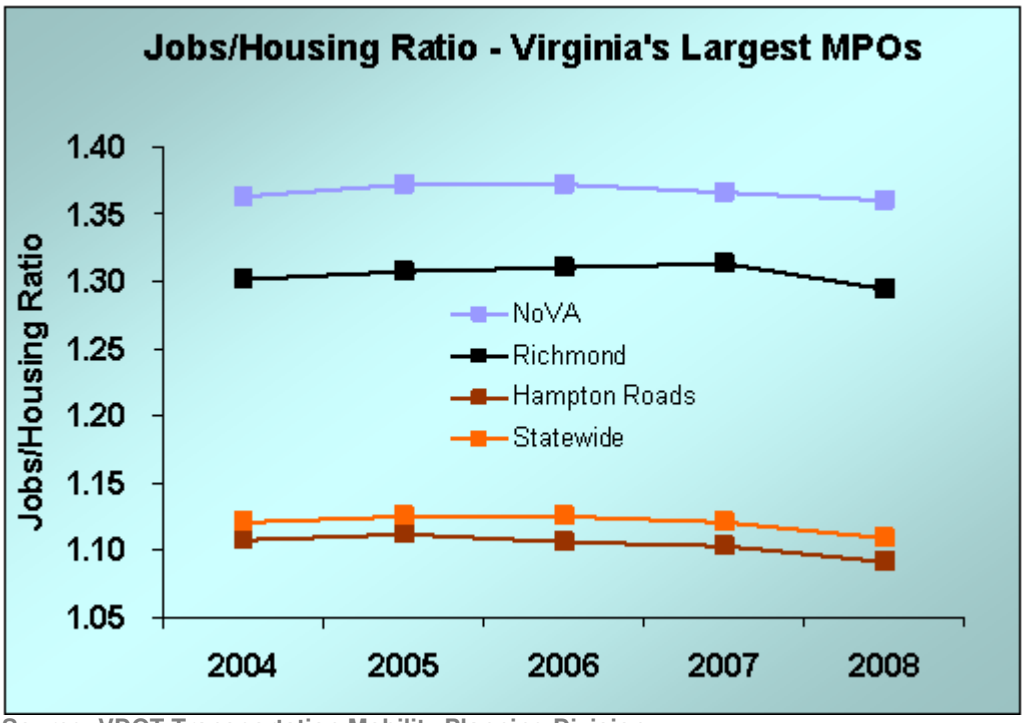
Overall, the Commonwealth of Virginia maintains a healthy jobs/housing ratio. In 2008, the statewide ratio was 1.11. However, ratios can differ greatly between regions, and even between neighboring localities. According to the Census Bureau, 51% of Virginians work outside of their county of residence, which is the highest percentage in the country and twice the national average.

Areas considered very jobs-rich, with ratios above 1.6, are scattered throughout the state. They include Richmond, Fairfax City, and Manassas in the major urban areas, but also smaller cities like Winchester, Galax, and Salem. The Commonwealth's many college towns, such as Charlottesville, Harrisonburg, Lynchburg, and Williamsburg are also very jobs-rich. It is also worth noting that the only counties outside of the major population centers to be considered jobs-rich are Albemarle, which surrounds Charlottesville, and Nottoway County, which is home to a military base.



Metropolitan Jobs/Housing Balance

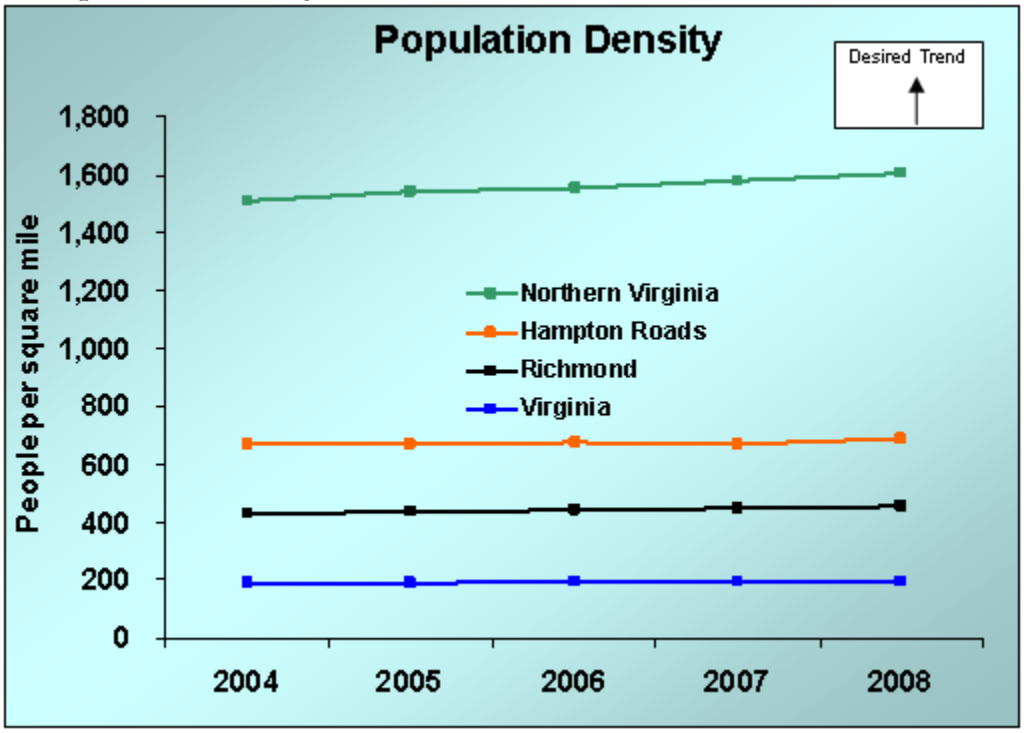
For Virginia's population centers of Northern Virginia, Richmond and Hampton Roads, the jobs/housing ratio shows that a significant jobs surplus exists in both Richmond and Northern Virginia, while Hampton Roads is only slightly jobs rich. Jobs/housing ratios change little from year to year, but metropolitan areas need to move towards balanced ratios in the long term. In these areas of high population density, the consequences jobs/housing imbalances are magnified. When people do not have the opportunity to live close to where they work, it is more likely that congestion and other negative transportation outcomes will occur.



Source: VDOT Transportation Mobility Planning Division

Population Density

Population density reflects the number of people living in a geographic area. Higher population density, in metropolitan areas, can facilitate the use of transit, walking and biking reducing the demand on the highway system and resulting in a more cost-effective multimodal transportation system. In particular, concentrating density around transit stations can improve the efficiency of the transit system and reduce traffic congestion. Density in the major metropolitan areas has been increasing slightly over time, although the changes have not been significant in the last 5 years.

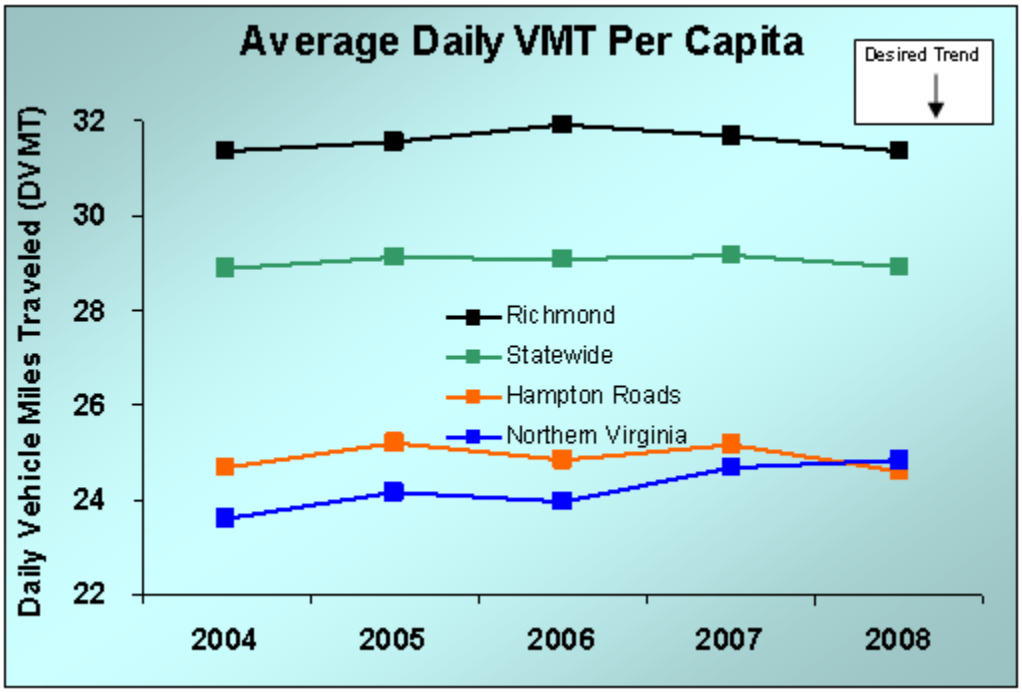


Source: US Census, VDOT Transportation Mobility Planning Division, data aligned by planning district commissions

Vehicle Miles Traveled Per Capita

The amount of highway travel is measured by the number of vehicle miles traveled (VMT) on the Virginia system. A reduction in vehicle miles traveled per capita indicates that people are driving less and that they are likely using other transportation options.

The graph below presents the annual average daily VMT (DVMT) per capita since 2004 for the Commonwealth and its three largest urban regions. DVMT per capita had been increasing over time and stabilized in 2007 in Richmond, while Northern Virginia continued to increase in 2008.



Source: US Census, VDOT Transportation Mobility Planning Division, data aligned by planning district commissions

Teleworking

According to a study conducted by the Department of Rail and Public Transportation, in 2007 12% of Virginia's workers teleworked on average at least once a week, up from 3.2 % in 2000. In the metropolitan areas, 21% of Northern Virginia's workers, 13% of Richmond's workers and 7% of Hampton Roads' workers teleworked. DRPT releases a comprehensive statewide telework report every three years.

Performance Summary

Grade = C+

Performance Measure		Desired Trend	Performance Trend
Job/Housing Ratio	Northern Virginia	↓	→
	Hampton Roads / Virginia Beach	↓	→
	Richmond area	↓	→
Population Density	Northern Virginia	↑	→
	Hampton Roads / Virginia Beach	↑	↑
	Richmond area	↑	→
Daily VMT per Capita	Northern Virginia	↓	→
	Hampton Roads / Virginia Beach	↓	↓
	Richmond area	↓	→

Goal: Program Delivery

Achieve excellence in the execution of programs and delivery of services

Grade = A

Program delivery focuses on the operational efficiency and effectiveness of the transportation agencies. Operational efficiency involves the business-like use of resources and effectiveness focuses on whether the desired outcome has been produced. While efficiency and effectiveness are not fundamental purposes of transportation systems, both are desirable characteristics and of concern to users and policy makers.

Performance Measures

- VDOT Administrative Expenditures as a Percent of Total Expenditures
- Total Operating Costs Per Transit Trip (2007 dollars)
- Percentage of VDOT Projects Completed both On-Time and On-Budget
- Average Wait Time at DMV Customer Service Centers
- Percentage of Satisfied VDOT Customers

Performance Highlights

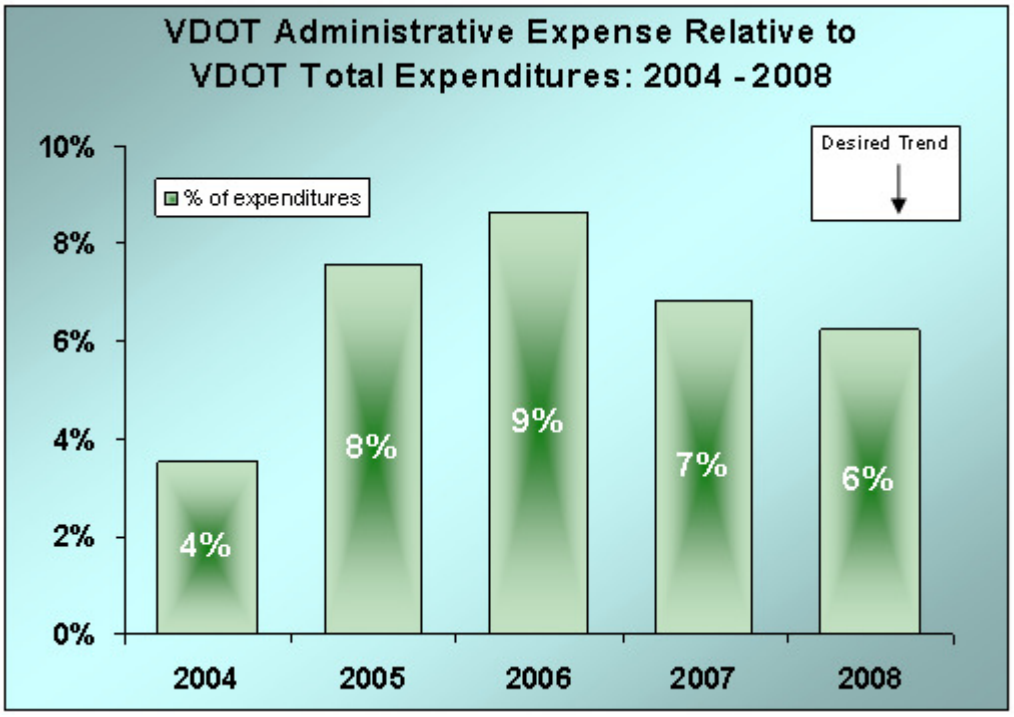
- VDOT's ratio of administrative expenditures to total expenditures decreased from 7% to 6%
- The average operating cost per transit trip decreased by $0.15 from 2007 to 2008
- The percent of VDOT's projects completed both on-time and on-budget decreased from 80% to 76%
- Wait times at DMV service centers decreased from an average of 22 to 18 minutes
- Customer satisfaction with VDOT's overall level of service increased from 82% to 83%

Strategies

- Identify, quantify, and mitigate project risks
- Assign responsibility and accountability to individuals for project delivery
- Attract and retain a highly qualified workforce
  - This includes professional engineers for the highway construction program
- Provide additional training and support services to transit operators
- Continue to improve staff project management skills
- Continually emphasize sharing of best-practices between districts and regions

VDOT Administrative Expenditures as a Ratio of Total Expenditures

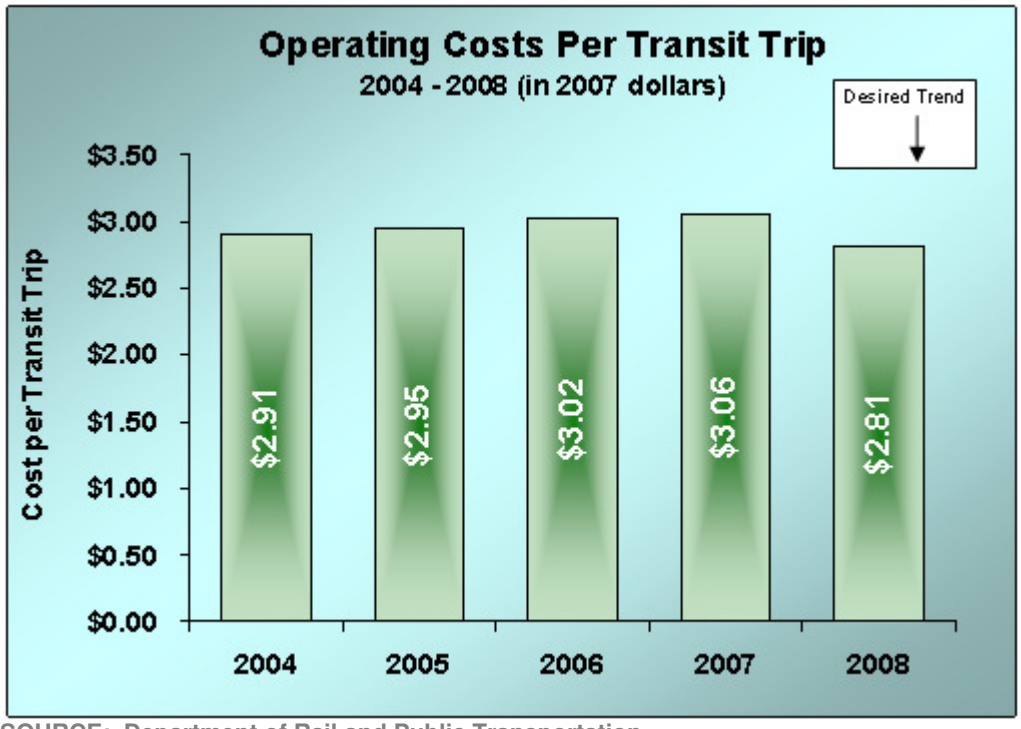
Administrative expenditures relative to total expenditures provide a gauge of agency efficiency. The share of transportation dollars used for overhead versus for construction and maintenance of roads has decreased since 2006 and amounted to 6% in 2008.



Source: Executive Final Report: Department of Transportation

Operating Cost per Transit Trip

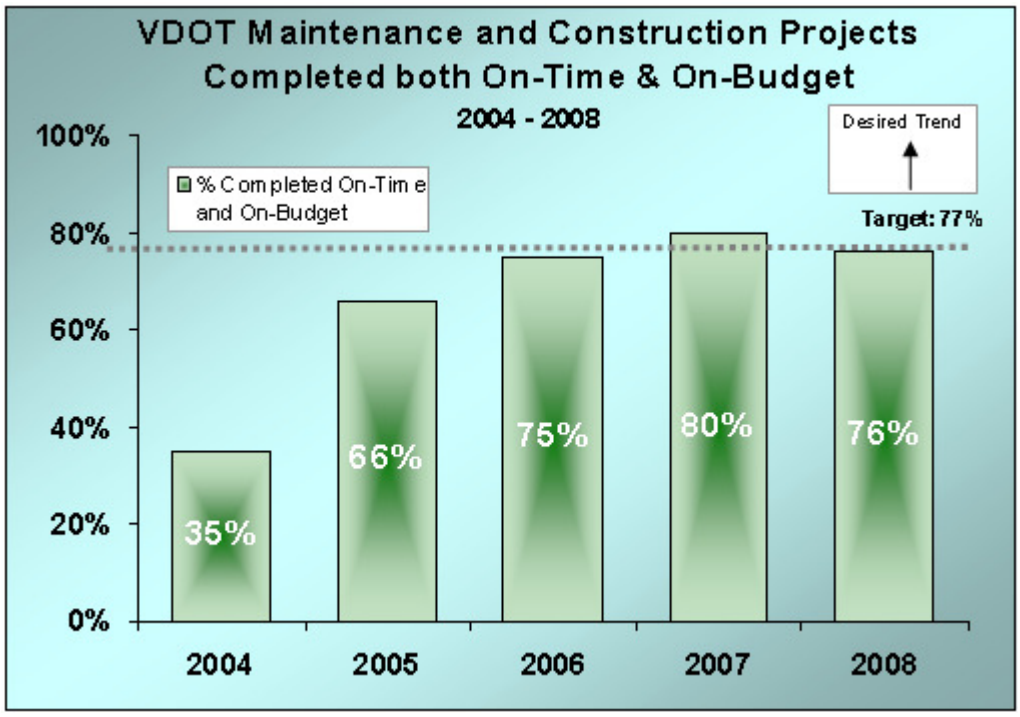
An indicator of transit efficiency is the average operating cost per transit trip. Increases could suggest decreased efficiency; however, adding new service or increases in the price of fuel will negatively impact the costs of operating the system. From 2003 through 2007, Virginia's average operating cost per trip increased 17% which was less than the national average of 24%. From 2007 to 2008, Virginia's cost per trip decreased 8% from $3.06 in 2007 to $2.81 in 2008 (inflation adjusted to 2007 dollars).



SOURCE: Department of Rail and Public Transportation

Maintenance and Construction Projects Completed On-Time/On-Budget (VDOT)

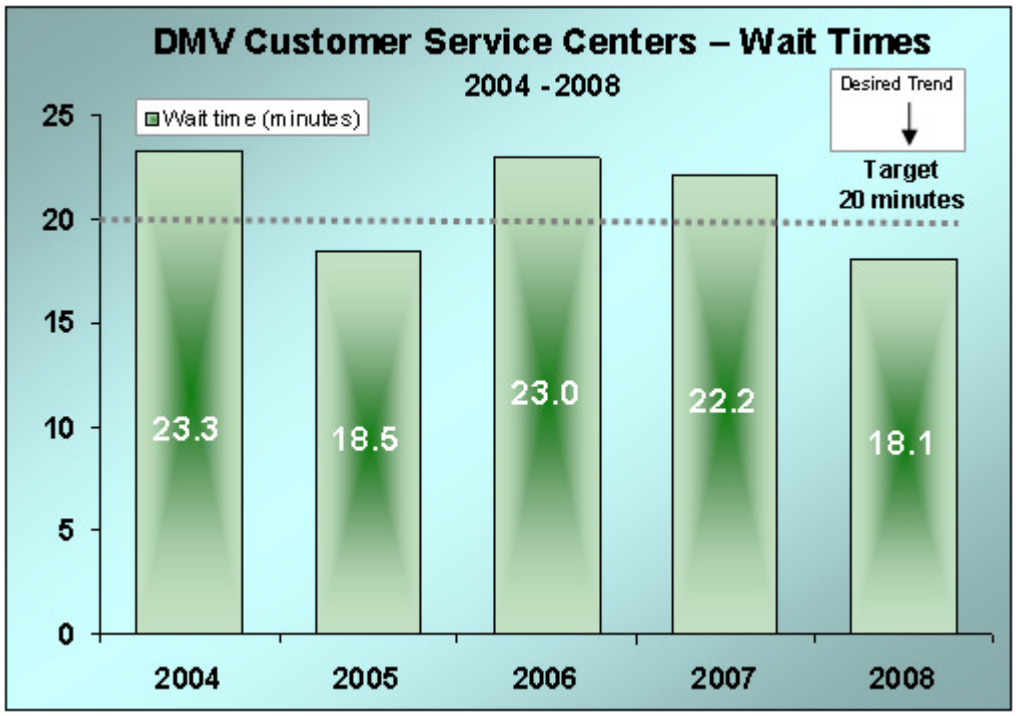
VDOT has significantly improved the number of projects that are built on time and within budget. The percentage of maintenance and construction projects completed "on-time and on-budget" increased from 27% in 2003 to 76.4 % in 2008, narrowly missing the established target of 77%.



Source: Department of Transportation

DMV Customer Service Centers – Average Wait Time

The DMV provides drivers licensing and vehicle registration services through 73 Customer Service Centers (CSC) located throughout the state. One measure of the efficiency of the centers is the amount of time customers have to wait to receive service. Average wait times have decreased in recent years and that trend continued in 2008 when the average across all CSCs was 18.1 minutes (surpassing DMV's established goal of 20 minutes).

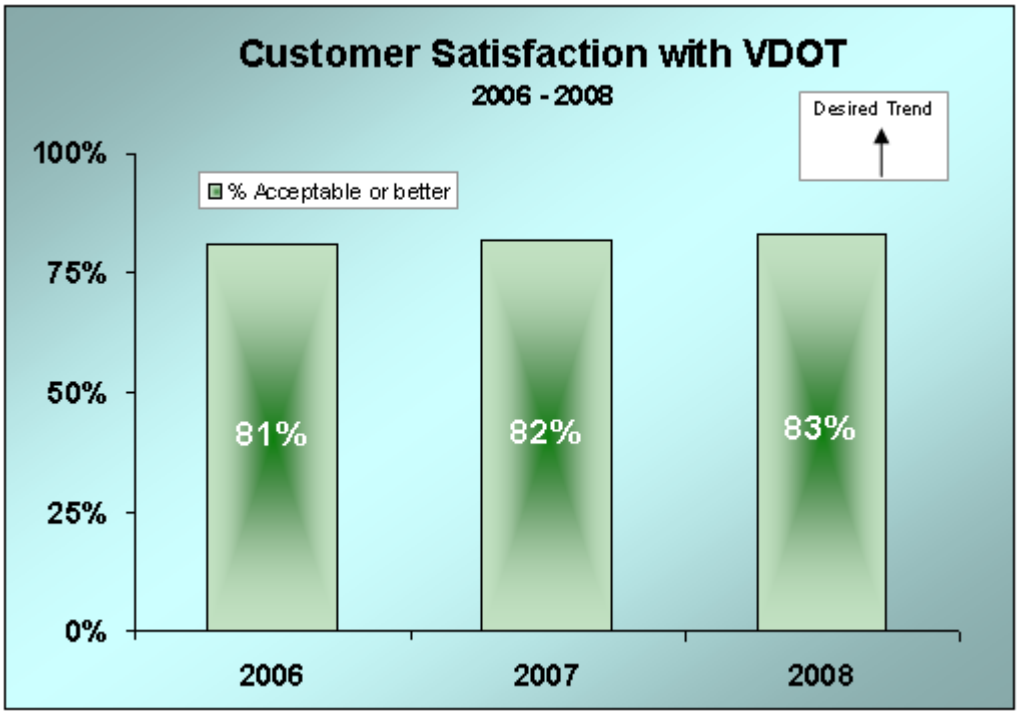


Source: Department of Motor Vehicles, VAPerforms Agency Report

Customer Satisfaction with VDOT

VDOT utilizes an independent research firm to conduct periodic surveys of Virginia residents to assess the level of satisfaction with VDOT and the state's highway facilities.

Each of the categories in the survey is rated on a scale from one to five, where one is 'Not at all Satisfied', and five is 'Very Satisfied', while three is considered "Acceptable". There was a slight increase in Overall customer satisfaction from 2007 to 2008, when 83% of customers responded that they felt VDOT services were acceptable or better.



Source: Department of Transportation's Dashboard

Performance Summary

Grade = A

Performance Measure	Desired Trend	Performance Trend
VDOT Administrative Expense compared to Total Expenditures	↓	↓
Operating Cost per Transit Trip	↓	↓
VDOT Projects Completed On-Time and On-Budget	↑	↓
DMV Customer Service Center Average Wait Time	↓	↓
VDOT Customer Satisfaction	↑	↑

Secretary of Transportation
Virginia Leading the Way

2008 TRANSPORTATION PERFORMANCE TREND REPORT

Office of INTERMODAL Planning and Investment

Overall Performance – B

Safety and Security	A
Highway Fatalities and Fatality Rate	↑
Highway Crashes and Crash Rate	↑
Transit Crashes	→
Aviation Crashes	↑
Compliance with Maritime Transportation Security Act	↑
Airports Participating in Voluntary Security Certification Plan	↑
Updated Safety and Security Plans	↑

Maintenance and Preservation	D
Interstate Pavement Condition	↓
Primary Pavement Condition	↓
Secondary Pavement Condition	↓
Bridge Condition	→
Average Transit Vehicle Age	↑

Environmental Stewardship	A
Mobile Source Emissions	↑
Greenhouse Gas Emissions	↑
Fuel Usage Per Capita	↑
Acres of Wetland Replaced	↑

Economic Vitality	C
Gross State Product - Transportation	↓
Port of VA East Coast Market Share	→
Transportation Sector Employment	→
Freight Through the Port of Virginia	↓
Number of Enplanements	↓
Discretionary Expenditures with Small, Women, and Minority-owned (SWaM) Businesses	↑

Transportation and Land Use	C+
VMT Per Capita – Northern VA	→
VMT Per Capita – Hampton Roads	↑
VMT Per Capita – Richmond	→
Population Density – Northern VA	→
Population Density – Hampton Roads	↑
Population Density – Richmond	→
Jobs/Housing Ratio – Northern VA	→
Jobs/Housing Ratio – Hampton Roads	→
Jobs/Housing Ratio – Richmond	→

Mobility, Accessibility and Connectivity	C+
Transit Trips Per Capita	→
Transit Revenue Miles	↑
HOV Use Northern VA	↓
HOV Use Hampton Roads	↓
Hours of Delay Northern VA	↓
Hours of Delay Hampton Roads	↑
Hours of Delay Richmond	→
Park and Ride Spaces	↑
Bicycle Travel	→
Pedestrian Travel	→
Intercity Rail Service	→
Freight Moved by Rail or Barge	↑

Program Delivery	A
VDOT Projects Completed On-Time and On-Budget	↓
Operating Cost Per Transit Trip	↑
VDOT Admin/Total Expenditures	↑
DMV Service Centers – Wait Time	↑
VDOT Customer Satisfaction	↑

Legend
Trending in Desired Direction ↑
Trending in Wrong Direction ↓
No Change →

COMMONWEALTH OF VIRGINIA